



SEQUENCE LISTING

<110> STEPHANOPOULOS, GREGORY
ALEVIZOS, ILIAS
MISRA, JATIN

<120> SYSTEMS AND METHODS FOR PROVIDING DIAGNOSTIC SERVICES

<130> MIN-P01-042

<140> 10/716,825

<141> 2003-11-18

<150> 60/427,265

<151> 2002-11-18

<150> 10/060,048

<151> 2002-01-29

<160> 43

<170> PatentIn version 3.3

<210> 1

<211> 817

<212> DNA

<213> Homo sapiens

<400> 1

agtcctgcgt ccgggccccg aggcgcagca gggcaccagg tggagcacca gctacgcgtg	60
gcgcagcgca gcgtccctag caccgagcct cccgcagccg ccgagatgct gcgaacagag	120
agctgccgcc ccaggtcgcc cgccggacag gtggccgcgg cgccccgct cctgctgctg	180
ctgctgctgc tcgcctggtg cgcgggcgcc tgccgaggtg ctccaatatt acctcaagga	240
ttacagcctg aacaacagct acagttgtgg aatgagatag atgatacttg ttcgtctttt	300
ctgtccattg attctcagcc tcaggcatcc aacgcactgg aggagctttg ctttatgatt	360
atgggaatgc taccaaagcc tcaggaacaa gatgaaaaag ataatactaa aaggttctta	420
tttcattatt cgaagacaca gaagttgggc aagtcaaatg ttgtgtcgtc agttgtgcat	480
ccgttgctgc agctcgttcc tcacctgcat gagagaagaa tgaagagatt cagagtggac	540
gaagaattcc aaagtcctt tgcaagtcaa agtcgaggat attttttatt caggccacgg	600
aatggaagaa ggtcagcagg gttcatttaa aatggatgcc agctaatttt ccacagagca	660
atgctatgga atacaaaatg tactgacatt ttgttttctt ctgaaaaaaa tccttgctaa	720
atgtactctg ttgaaaatcc ctgtgtgtgc aatgttctca gttgtaacaa tgttgtaa	780
gttcaatttg ttgaaaatta aaaaatctaa aaataaa	817

<210> 2
 <211> 2712
 <212> DNA
 <213> Homo sapiens

<400> 2
 ggatcctagg atgcttacat gcaatgatga acccgaaaac acttgtaaag tgctacgtaa 60
 atattgatca cgaagaagga agtcctcttc ccgcctggag actgtgtggg gtatggcggc 120
 gtgggtggaga gaatgtggtg tcttgttcca ccctcctgga gaggggaggg cctggcctgg 180
 accgcagagg aatcgagtga ctgcccctaa aatctcctag aaccgatccc gtggacccgt 240
 ccctcccgag ggccccgcc ctcccggtgt ccgtcagcct ctgccgcgga gctgcgtccg 300
 ccactcattt tctccgagca ggcttgccg cgctctcccc gcttcttcgc agtcttcggc 360
 cctctcctgt cgccgccatg agcactggca ccttcgtcgt gtcgcagccg ctcaattacc 420
 gcggcggggc cgctggagcc ggcgacgct ccggtaccga gaaagcttcc gagccagcaa 480
 ccggccgagt gatagctact ttcacatgtt caggagaaaa ggaagtaaat ttggctgttc 540
 aaaatgcaaa ggctgctttt aaaatatgga gtcaaaaatc tggcatggag cgttgccgaa 600
 tccttttggga ggctgccagg ataataaggg aacgggagga tgaaattgct actatggagt 660
 gcatcaacaa tggcaagtc atctttgagg ccgcttgga cattgacatt tcctggcagt 720
 gcctggagta ttatgcgggc ttggctgcat ccatggctgg tgaacacatc cagctcccag 780
 gtggatcggt tgggtatacc agaagagaac cacttggggg atgtgtggga ataggagcat 840
 ggaactaccc ctttcagatt gcctcttgga agtcggctcc agcattagcc tgttgtaatg 900
 ccatggtctt taaaccttct ccctttacac ctgtttctgc attgctactg gctgaaatct 960
 acagtgaggg tgggtgtacct cctgggctct tcaatgtggg gcagggaggg gctgccacag 1020
 gccagtttct gtgtcagcat ccgatgtgg ccaaagtctc cttcactgga agtgtgcca 1080
 ctggcatgaa gatcatggag atgtcagcta aaggaatcaa acctgttacc ttggaacttg 1140
 gagggaaatc tccactcatc atcttctcag actgtgatat gaacaatgct gttaaagggg 1200
 cgctgatggc caacttcctc acacaaggcc aggtttgctg taatggcaca agagtatttg 1260
 tgcagaaaga aattcttgat aaatttacag aggaagtggg gaaacagacc caaaggatta 1320
 aaattggaga tccccctctg gaagatacaa ggatgggtcc actcatcaac cgaccacacc 1380
 tggagcgagt ccttgggttt gtcaaagtgg caaaggagca gggtgctaaa gtgttatgtg 1440
 gtggagatat atatgtacct gaagatccca aattaaagga tggatattac atgagacctt 1500
 gtgtattaac taattgcaga gacgacatga cctgtgtgaa ggaagagatc tttgggcctg 1560

ttatgtccat	tttatcat	ttt gacactgaag	ctgaggttct	agaaagagcc	aatgatacca	1620
cttttggact	agcagctggc	gtctttacca	gggacatcca	acgggctcat	agagtggtag	1680
ctgagcttca	ggctgggacg	tgtttcatta	acaactataa	cgtcagccca	gtggagtgtc	1740
cctttggtgg	atataagaag	tcaggatttg	gcagagagaa	cggccgtgtg	acaatcgaat	1800
attattcaca	gctgaagact	gtgtgtgtgg	agatgggtga	tgtggaatct	gctttttgaa	1860
aacctgcagt	gaaacctatt	gacatggcca	cgctgtgaat	gatgtgaatt	ggccctgttt	1920
acagaggcag	tacaactgaa	tgttatttta	catccagaat	tttggcgttc	agtataagag	1980
aatggttcat	gttactcttt	ctctctccat	cagcttcctc	actgaaaatg	tgcattaagt	2040
gccttgtaga	tactaatcaa	gaaagctgtg	attctcctca	aagcgtat	ttgtgaaatc	2100
ttttaagagc	cagtaacata	cttctagaga	acaggaaaga	gactaggata	atacatcttc	2160
cacacatttg	gccactgat	aatgttaatt	ctctggcgta	tttcaaagaa	cttgttcctg	2220
gctgatccaa	gtgcagtgg	atttacaact	aattgatcac	aaccagtttg	tagatttctt	2280
tgttccttct	ccattccac	tgtttcactt	gcctagtctt	gaagaaaaaa	aacaaaaaac	2340
aaaaaaaacc	ttgttccttt	ataggttcct	ggtagaatca	gtagagatga	tttcagctca	2400
ttgacatttt	taagctgtat	ccccttgtca	ttccattgag	aaagctgaca	actgggatag	2460
ggaggggatt	agataataga	tggggtcaaa	ttctgtgtga	atgtgaactt	gcctagtaag	2520
cactttgtct	ctgttcacta	ctgcgataga	ggaaatctac	tccctatctt	gggtccttga	2580
actacagcct	gctgtcttac	accagtggag	ctacccttta	aatgtacaaa	ttaatttgta	2640
tgctaatgta	atatggtgaa	attaaaataa	atcacactgt	taattgttaa	aaaaaaaaaa	2700
aaaaaggaat	tc					2712

<210> 3

<211> 2267

<212> DNA

<213> Homo sapiens

<400> 3

ctcgagctcc	ccacttcctg	ggcttctggg	gctggggtct	tagcatcttc	tcccaggcct	60
ccccccccc	ataggtggct	gccctggggc	cagggaaaccg	aagtccctggg	ggggtgagag	120
gggcaggtgg	ggagacgggt	ggccagactg	gtgggcagga	ggccagagca	ggccaggctc	180
tgggcccctc	tctctgtctt	tctgcgttgg	ggcccagccc	tccgtagaca	accatgtgtc	240
actgctgcct	gggaaggaca	ggaagttgcc	gggtgggctg	cgagttgtga	gggattagag	300
agcgggtgcc	caggcagggg	ggtggggctg	cggctcctgc	ccacctcgcc	atctgctggg	360

gtgcccacct gctgtcttggg gccgctcgcc ctctgcctct gctggggggg ctctgtaacg	420
tgggtgtcttg ctcccctacc tgcagagcaa cggcaaaggc aaggactgcg tcttcacgga	480
gattgtgctg gagaacaact acacagcgct gcagaatgcc aagtacgagg gctggtacat	540
ggccttcacc cgcaagggcc ggccccgcaa gggctccaag acgcggcagc accagcgtga	600
ggtcacttc atgaagcggc tgccccgggg ccaccacacc accgagcaga gcctgcgctt	660
cgagtccctc aactaccgc ccttcacgcg cagcctgcgc ggcagccaga ggacttgggc	720
ccccgagccc cgatagtgt gcctggccct ccccaaatg ccagaccgca gagaggctca	780
tcctgtaggg caccctaaac tcaagcaaga tgagctgtgc gctgctctgc aggctgggga	840
gggtgctgggg gagccctggg ttccggttgt tgatattgtt tgctgttggg tttttgctgt	900
tttttttttt tttttttttt ttaaaacaaa agagaggctc tttttttgta ttccacttgg	960
ctgtgggtgc tgtcttctta actctcagaa agctccatta gtggcctaga ctgggattcc	1020
ggctgggggt ttgcgggggt ggggggcttt ctctagcctg tgctgctgag gccccagtac	1080
ctccagggcc agttggctgg gcagccaggg actccaactgc acccccaggt ggggcaggga	1140
ggaaaggact gtgacatagg gcagtcctct tagaagtggg tatcagactg gtggctatta	1200
aatgattgaa atattttatt aacttgcata ttaaaaatgt gtgctggaga gtgagtcctg	1260
ccggggtcag cccctccctc caaccttgcc ccagctgggtg ggcggctggg agacgcagat	1320
gaccaggtgc cagctctgac cacagcctcc ctccagccta aagacacctg cctgtcaacc	1380
atccccatca ctgtcacttg aggggttttc ctgcaaggac agaagcaggg aaaggggcaa	1440
gaagaggctc ttagctagtc cttggagctc tcagatgtgt acctcctagc actttacaga	1500
ggtcattgct aacacttccc caggccacct cagggccaga aataatggat gtgctagggc	1560
tagagctgta atcatggatt taatcctctt aaaaagtgt tctctgagt cctaggtcca	1620
tgtgggagac aggttggaga ttccagaact tgctctttct gagactcagg ctccagaaaa	1680
tgaaagaaaa gagcagctgc cagggcccaa ggtgggggca tattggaggg ggaccaccaa	1740
gactggtgtt gacaatgggt atgtgggaca agtggttaacc ttgggtgata tgggtgagata	1800
gctgtgggca gaaagcactg agctgaggtg cggcgaggag cctggggaac tgtcttcag	1860
gaagaggctg ccacctcgg aggatgggct ggcgggagag gagctgggca ccggatggca	1920
ccagaaggga agctcatagg cctagcgag aactaaaggc agtcatagcc ttggggagaa	1980
gcaggaggcc gtatgtggag ggaggagggt ctgctgtggg agtgggtggag caggatcatg	2040
tgtgggcaga gaagggaatg ggcaagggtg cagggtgtgtg tttgcgtgtg gactggtgag	2100

actggtgtcc	tgccacaccg	agggagagcc	caggccccac	ggcagtttcc	tgagtgcaga	2160
gctggcccag	gcttcacgc	tgaggcctcc	cattagggct	gctcctgctt	ccttccttgt	2220
ggatgccttg	ggctgggtccc	acagcccagc	tactgagcca	gtctaga		2267

<210> 4
 <211> 4975
 <212> DNA
 <213> Homo sapiens

<400> 4						
ctctcacaca	cacacacccc	tcccctgcca	tccctccccg	gactccggct	ccgggtccga	60
ttgcaatttg	caacctccgc	tgccgtcgcc	gcagcagcca	ccaattcgcc	agcggttcag	120
gtggctcttg	cctcgatgtc	ctagcctagg	ggcccccg	ccggacttgg	ctgggtcccc	180
ttcacccctct	gcggagtcac	gagggcgaaac	gacgctctgc	aggtgctggg	cttgcttttc	240
agcctggccc	ggggctccga	ggtgggcaac	tctcaggcag	tgtgtcctgg	gactctgaat	300
ggcctgagtg	tgaccggcga	tgctgagaac	caataccaga	cactgtacaa	gctctacgag	360
aggtgtgagg	tggtgatggg	gaaccttgag	attgtgctca	cgggacacaa	tgccgacctc	420
tccttcctgc	agtggattcg	agaagtgaca	ggctatgtcc	tcgtggccat	gaatgaattc	480
tctactctac	cattgcccac	cctccgcgtg	gtgcgaggga	cccaggctta	cgatgggaag	540
tttgccatct	tcgtcatggt	gaactataac	accaactcca	gccacgctct	gcgccagctc	600
cgttgactc	agctcaccga	gattctgtca	gggggtgttt	atattgagaa	gaacgataag	660
ctttgtcaca	tggacacaat	tgactggagg	gacatcgtga	gggaccgaga	tgctgagata	720
gtggtgaagg	acaatggcag	aagctgtccc	ccctgtcatg	aggtttgcaa	ggggcgatgc	780
tggggctctg	gacgagaaga	ctgccagaca	ttgaccaaga	ccatctgtgc	tcctcagtgt	840
aatggctact	gctttgggcc	caaccccaac	cagtgtctgc	atgatgagtg	tgccgggggc	900
tgctcaggcc	ctcaggacac	agactgcttt	gcctgccggc	acttcaatga	cagtggagcc	960
tgtgtacctc	gctgtccaca	gcctcttgtc	tacaacaagc	taactttcca	gctggaaccc	1020
aatccccaca	ccaagtatca	gtatggagga	gtttgtgtag	ccagctgtcc	ccataacttt	1080
gtggtggatc	aaacatcctg	tgtcagggcc	tgctcctctg	acaagatgga	agtagataaa	1140
aatgggctca	agatgtgtga	gccttggtgg	ggactatgtc	ccaaagcctg	tgaggggaaca	1200
ggctctggga	gccgcttcca	gactgtggac	tcgagcaaca	ttgatggatt	tgtgaactgc	1260
accaagatcc	tgggcaacct	ggactttctg	atcacccggc	tcaatggaga	ccctggcac	1320

aagatccctg	ccctggaccc	agagaagctc	aatgtcttcc	ggacagtacg	ggagatcaca	1380
ggttacctga	acatccagtc	ctggccgccc	cacatgcaca	acttcagtgt	tttttccaat	1440
ttgacaacca	ttggaggcag	aagcctctac	aaccggggct	tctcattggt	gatcatgaag	1500
aacttgaatg	tcacatctct	gggcttccga	tccctgaagg	aaattagtgc	tgggcgtatc	1560
tatataagtg	ccaataggca	gctctgctac	caccactctt	tgaactggac	caagggtgctt	1620
cggggggccta	cggaagagcg	actagacatc	aagcataatc	ggccgcgcag	agactgcgtg	1680
gcagaggggca	aagtgtgtga	cccactgtgc	tcctctgggg	gatgctgggg	cccaggccct	1740
ggtcagtgct	tgtcctgtcg	aaattatagc	cgaggagggtg	tctgtgtgac	ccactgcaac	1800
tttctgaatg	gggagcctcg	agaatttgcc	catgaggccg	aatgcttctc	ctgccacccg	1860
gaatgccaac	ccatgggggg	cactgccaca	tgcaatggct	cgggctctga	tacttgtgct	1920
caatgtgccc	attttcgaga	tgggccccac	tgtgtgagca	gctgccccca	tggagtcccta	1980
ggtgccaaag	gccaatcta	caagtaccca	gatgttcaga	atgaatgtcg	gccctgccat	2040
gagaactgca	cccaggggtg	taaaggacca	gagcttcaag	actgtttagg	acaaacactg	2100
gtgctgatcg	gcaaaaccca	tctgacaatg	gctttgacag	tgatagcagg	attggtagtg	2160
attttcatga	tgctgggcgg	cacttttctc	tactggcgtg	ggcgccggat	tcagaataaa	2220
agggctatga	ggcgatactt	ggaacggggg	gagagcatag	agcctctgga	ccccagtga	2280
aaggctaaca	aagtcttggc	cagaatcttc	aaagagacag	agctaaggaa	gcttaaagtg	2340
cttggctcgg	gtgtctttgg	aactgtgcac	aaaggagtgt	ggatccctga	gggtgaatca	2400
atcaagattc	cagtctgcat	taaagtcatt	gaggacaaga	gtggacggca	gagttttcaa	2460
gctgtgacag	atcatatgct	ggccattggc	agcctggacc	atgccacat	tgtaaggctg	2520
ctgggactat	gcccagggtc	atctctgcag	cttgtcactc	aatatttgcc	tctgggttct	2580
ctgctggatc	atgtgagaca	acaccggggg	gcactggggc	cacagctgct	gctcaactgg	2640
ggagtacaaa	ttgccaaagg	aatgtactac	cttgagggaac	atgggtatgg	gcatagaaac	2700
ctggctgccc	gaaacgtgct	actcaagtca	cccagtcagg	ttcagggtgg	agatttttgt	2760
gtggctgacc	tgctgcctcc	tgatgataag	cagctgctat	acagtgaggc	caagactcca	2820
attaagtgga	tggcccttga	gagtatccac	tttgggaaat	acacacacca	gagtgatgtc	2880
tggagctatg	gtgtgacagt	ttgggagttg	atgaccttcg	gggcagagcc	ctatgcaggg	2940
ctacgattgg	ctgaagtacc	agacctgcta	gagaaggggg	agcggttggc	acagccccag	3000
atctgcacaa	ttgatgtcta	catggtgatg	gtcaagtgtt	ggatgattga	tgagaacatt	3060

cgcccaacct	ttaaagaact	agccaatgag	ttcaccagga	tggcccgaga	cccaccacgg	3120
tatctgggtca	taaagagaga	gagtgggcct	ggaatagccc	ctggggccaga	gccccatggt	3180
ctgacaaaca	agaagctaga	ggaagtagag	ctggagccag	aactagacct	agacctagac	3240
ttggaagcag	aggaggacaa	cctggcaacc	accacactgg	gctccgccct	cagcctacca	3300
gttgaacac	ttaatcggcc	acgtgggagc	cagagccttt	taagtccatc	atctggatac	3360
atgccccatga	accagggtaa	tcttgggggg	tcttgccagg	agtctgcagt	ttctgggagc	3420
agtgaacggt	gccccgtcc	agtctctcta	cacccaatgc	cacggggatg	cctggcatca	3480
gagtcatcag	aggggcatgt	aacaggctct	gaggctgagc	tccaggagaa	agtgtcaatg	3540
tgtagaagcc	ggagcaggag	ccggagccca	cggccacgcg	gagatagcgc	ctaccattcc	3600
cagcgccaca	gtctgctgac	tcctgttacc	ccactctccc	cacccgggtt	agaggaagag	3660
gatgtcaacg	gttatgtcat	gccagataca	cacctcaaag	gtactccctc	ctcccgggaa	3720
ggcacccttt	cttcagtggg	tctcagttct	gtcctgggta	ctgaagaaga	agatgaagat	3780
gaggagtatg	aatacatgaa	ccggaggaga	aggcacagtc	cacctcatcc	ccctaggcca	3840
agttcccttg	aggagctggg	ttatgagtac	atggatgtgg	ggtcagacct	cagtgcctct	3900
ctgggcagca	cacagagttg	cccactccac	cctgtacceca	tcatgcccac	tgcaggcaca	3960
actccagatg	aagactatga	atatatgaat	cggcaacgag	atggagggtg	tcctgggggt	4020
gattatgcag	ccatgggggc	ctgcccagca	tctgagcaag	ggtatgaaga	gatgagagct	4080
tttcaggggc	ctggacatca	ggccccccat	gtccattatg	ccgcctaaa	aactctacgt	4140
agcttagagg	ctacagactc	tgcctttgat	aaccctgatt	actggcatag	caggcttttc	4200
ccaaggcta	atgcccagag	aacgtaactc	ctgctccctg	tggcactcag	ggagcattta	4260
atggcagcta	gtgcctttag	agggtaccgt	cttctcccta	ttccctctct	ctcccaggtc	4320
ccagccccct	ttccccagtc	ccagacaatt	ccattcaatc	tttggaggct	tttaaacatt	4380
ttgacacaaa	attcttatgg	tatgtagcca	gctgtgcaact	ttcttctctt	tcccaacccc	4440
aggaaagggt	ttccttattt	tgtgtgcttt	cccagtecca	ttcctcagct	tcttcacagg	4500
cactcctgga	gatatgaagg	attactctcc	atatcccttc	ctctcaggct	cttgactact	4560
tggaactagg	ctcttatgtg	tgcctttggt	tcccatcaga	ctgtcaagaa	gaggaaaggg	4620
aggaaaccta	gcagaggaaa	gtgtaatttt	ggtttatgac	tottaacccc	ctagaaagac	4680
agaagcttaa	aatctgtgaa	gaaagagggt	aggagtagat	attgattact	atcataattc	4740
agcacttaac	tatgagccag	gcatacatact	aaacttcacc	tacattatct	cacttagtcc	4800

tttatcatcc	ttaaaacaat	tctgtgacat	acatattatc	tcattttaca	caaagggaag	4860
tcgggcatgg	tggctcatgc	ctgtaatctc	agcacttttg	gaggctgagg	cagaaggatt	4920
acctgaggca	aggagtttga	gaccagctta	gccaacatag	taagaccccc	atctc	4975

<210> 5

<211> 1867

<212> DNA

<213> Homo sapiens

<400> 5

gaagctccca	actcgccggc	ctggccacgg	gatggccccc	aaattcccag	actctgtgga	60
ggagctccgc	gccgccggca	atgagagttt	ccgcaacggc	cagtacgccg	aggcctccgc	120
gctctacggc	cgcgcgctgc	gggtgctgca	ggcgcaaggt	tcttcagacc	cagaagaaga	180
aagtgtttctc	tactccaacc	gagcagcatg	tcactggaag	aatggaaact	gcagagactg	240
catcaaagat	tgcacttcag	cactggcctt	ggttcccttc	agcattaagc	ccctgctgcg	300
gcgagcatct	gcttatgagg	ctctggagaa	gtaccctatg	gcctatgttg	actataagac	360
tgtgctgcag	attgatgata	atgtgacgtc	agccgtagaa	ggcatcaaca	gaatgaccag	420
agctctcatg	gactcgcttg	ggcctgagtg	gcgcctgaag	ctgccctcat	tccccttggt	480
gcctgtgtca	gctcagaaga	ggtggaattt	cttgcccttcg	gagaaccaca	aagagatggc	540
taaaagcaaa	tccaaagaaa	ccacagctac	aaagaacaga	gtgccttctg	ctgggggatgt	600
ggagaaagcc	agagtcttga	aggaagaagg	caatgagctt	gtaaagaagg	gaaaccataa	660
gaaagctatt	gagaagtaca	gtgaaagcct	cttgtgtagt	aacctggaat	ctgccacgta	720
cagcaacaga	gcactctgct	at ttggctct	gaagcagtac	acagaagcag	tgaaggactg	780
cacagaagcc	ctcaagctgg	atggaaagaa	cgtgaaggca	ttctacagac	gggctcaagc	840
ccacaaagca	ctcaaggact	ataaatccag	ctttgcagac	atcagcaacc	tcctacagat	900
tgagcctagg	aatggctcctg	cacagaagtt	gcggcaggaa	gtgaagcaga	acctacacta	960
aaaacccaac	agggcaactg	gaacccctgc	ctgaccttac	ccagagaagc	catgggccac	1020
ctgctctgtg	cccgtcctg	aaaccagca	tgccccaaagt	gagctctgaa	gccccctcct	1080
caatcccttg	atggcctccc	accctgtaag	aggctttgct	tgttcaaatt	aaactcagtg	1140
tagtcaaaca	cagacatggg	tgttgacca	gaaagggtccc	cactagagct	aagcgtgaag	1200
ctgaagctct	gtccctattc	ccccagccca	gctagctgat	cacaccaaca	gacctcatc	1260
agcaaagcat	ttggctttgt	cctgccccaa	tgggctgcag	actgagtgct	gcccttgtag	1320
cttccccaga	ccccaaactca	ctgcagttca	tctgaacaac	ctgagctcct	gggccggggg	1380


```

ggaaggaggg ggataaacct aaggccctga tccaaagcag cctggtgagc tggttctcca 1440
gggctgcagt ctctccaggt gtacagctgt ccctgccctg tcctgtcctt gcacagtctc 1500
ctatgtctga gccccagtgc cttctgttcg ggccctcctt tgggtgggaaa ggcagagccc 1560
tgacccttga atgggtgtcc ttgactctgt gctgctgcct tctgcagaga ggcacctaa 1620
ctgtttaaag agcccagtga ttgtggctgc tcctcctaga ggtgggaggg ggcaagaggg 1680
ctccttggtc agtgtccatg ctttctgggc agggacttgg ttttttgttc caacagtggc 1740
cttctccggg cttcatagtt ctttctaata tgttgaagtt aatttgaatt gactgatttt 1800
gttgaactgt gtgtttaagc tgttgcatta aaaagctttc ttctacatca aaaaaaaaaa 1860
aaaaaaa 1867

```

<210> 6

<211> 4043

<212> DNA

<213> Homo sapiens

<400> 6

```

cgaagcgggt cctgccccgc tgtcagctgc ggcccccggc gccgggcggg ggtggccgcg 60
accattggcg gagaggcgaa aggggcgggg ccgccgccag ccgctgcggg caaggctgaa 120
caggcggagg tgggcagccg gccagggaag cacgggtccag gcggctacat tcggccccgc 180
catggcagcg gcgcccctga aagtgtgcat cgtgggctcg gggaactggg gttcagctgt 240
tgcaaaaata attggaata acgtcaagaa acttcagaaa ttgacctca cagtcaagat 300
gtgggtcttt gaagaaacag tgaatggcag aaaactgaca gacatcataa ataatgacca 360
tgaaaatgta aaatatcttc ctggacacaa gctgccagaa aatgtggttg ccatgtcaaa 420
tcttagcgag gctgtgcagg atgcagacct gctggtgttt gtcattcccc accagttcat 480
tcacagaatc tgtgatgaga tcaactgggag agtgcccaag aaagcgctgg gaatcaccc 540
catcaagggc atagacgagg gccccgagg gctgaaactc atttctgaca tcatccgtga 600
gaagatgggt attgacatca gtgtgctgat gggagccaac attgccaatg aggtggctgc 660
agagaagttc tgtgagacca ccatcggcag caaagtaatg gagaacggcc ttctcttcaa 720
agaacttctg cagactccaa attttcgaat tacgggtggt gatgatgcag aactgttga 780
actctgtggt gcgcttaaga acatcgtagc tgtgggagct gggttctgcg acggcctccg 840
ctgtggagac aacaccaaag cggccgtcat ccgcctggga ctcattggaaa tgattgcttt 900
tgccaggatc ttctgcaaag gccaaagtgtc tacagccacc ttcttagaga gctgcgggg 960

```

ggccgacctg atcaccacct gttacggagg gcggaaccgc aggggtggccg aggccttcgc	1020
cagaactggg aagaccattg aagagttgga gaaggagatg ctgaatgggc aaaagctcca	1080
aggaccgcag acttctgctg aagtgtaccg catcctcaaa cagaagggaac tactggacaa	1140
gtttccattg tttactgcag tgtatcagat ctgctacgaa agcagaccag ttcaagagat	1200
gttgtcttgt cttcagagcc atccagagca tacataaagt gaatcatgca acgtgttggg	1260
ggaagttctg cttttctgat caatcttttg ggttcacgtg gaaaccagga cttggcaaca	1320
tgatgtttga ctgtaatctc atcacggata tgtatgaatt ttacaggtt cgtttttgaa	1380
ttgtgagagg cagttcatta gcaaagatgt actgggcagt aactaaacac acatgcaaac	1440
atgtgaatgg tggtttattc ctcatctctg ggatgtttct atgagccaaa atttgatgtc	1500
tttttttcaa aattgcttat gaaatttcca cacaatcgta gcttataaga ttggaacgat	1560
ctcagccaaa tatttttaggt gtaattcata tgtatttgag tggaggattt ttttctcat	1620
ttttctagtg ttaaatttta accagcatta acatggtaga gtggaggagt gagtgtgttc	1680
aaagatcaac atattttaact tttaaacact atctcaaagc cagcataatt aactactttg	1740
attgtgggct gacctttgtt tttttaacaa tcaggcattt ttaattagat aatccactca	1800
tgtatttccc cctcactgca gttgtctgca tttttagcct cttttctctt cgttagttgt	1860
cagaatatgc ctttgtcaag gctcagaggt aacaagacag aaaattcatc tgggattttc	1920
ctgctgtggc tggcacattc ttctgattaa cagacacttg tatgatgctt taggctagtt	1980
agtgcatttt ttagcaaaca tttatcttaa acatcacaga tccactgggg ggtgcaaggg	2040
gctactgtta gtctcttctg tagatgcagt cactcctcct ggtcacctag tgagcagggg	2100
cagagccagg agtcaagtgc agtgccaagg tgcattgccc tctgagaagt cactgggctg	2160
atttgacctc cgactcattg gttgtgtaaa tgccatgtgc agcctttcct gaggccatag	2220
gagggttcc tgcagctgag atctatgcag gccatcctct caacaggtgc cactccaagg	2280
gcggtcctcg gtgcagcagc atcagcttca cttgtggggg ggtgggggaa ggggcggtct	2340
cagaaatgca ggttcccagg tcccaccctg gacttctgaa ggggtgtggc atctgtgttt	2400
ctgatgctta ctacaatatg tgaaccacta ctttagaaaa tctgctttaa cttgggtattc	2460
ctctaattgt gttccctagg aaatgactgt cccaagagcc agtgattatt ccagggtgtc	2520
cctggaaagg tcaagtgagt ctgggaaaca ctatgtctgt acacctcttg aagggtgcga	2580
atgtatgttt atacatcagt ggaaccatt tttctagcct agcaagtccc aaacacatta	2640
cactgaagag attttgggtga ggaaacttgc tggagttttc aggggaacact gttctaggct	2700

taggtgacct	taggatcact	caagtagacc	cttcactccc	tgcgagaaat	taggatgaat	2760
aactacctgt	ggcattgttg	gttctgaact	tttacagttc	aggcctgctg	tgaatctttg	2820
atgaagcttt	aaggtgacac	tgttgtaaca	gatgtcagct	ttgctgaaac	gcacattacc	2880
tggaataagt	gctttaattg	tagaattaga	atgggattta	ctgtactggt	ttaaatgaga	2940
ttggcttcag	aatccattac	agttacctta	catagcactt	gatacgtggt	aatgaacat	3000
atgaatgtaa	tttatatatt	cctagaattt	aagttacttt	gtgagatttg	ggcctgtccc	3060
tcaatgccag	tttaggattt	ctttttttct	ataccttgaa	atgattataa	aatagatttt	3120
catgggaatt	ttaaaaactc	tatccaaaac	atttttggag	catttttaaag	ccccatacac	3180
agaagtatac	gaaagcacac	aaaacactcc	aagtttcagc	agtttttagcg	ccaccattaa	3240
cccactttgc	ttgtctcatg	aaaaatcttt	gttaaagttt	gtacacaggt	aacaaaaagt	3300
tactttaaaa	gatatataaa	gggctgtaag	ctaattgtgg	tgtctagtaa	gtagcataat	3360
gagatgtgag	gagttggaac	tttgcggtgt	ttgcgtattt	tcactctgat	tcagcttctt	3420
actctgggtt	tgtactcgag	tggtatttct	ttacaaatgc	ccttgtaatt	accactctga	3480
agtctgctga	ctgtgtctct	tgaacatact	taggatattc	tgacacattat	ggaaaaaggt	3540
aaattttaga	agtttctgct	ctactaactg	tagatattta	tgactctgcg	agttatctat	3600
ttttataacc	acctgtgggtc	cattgttcat	tttaattcac	atttcttatg	aagtatggta	3660
acagggaggg	agacacctag	attagcagct	caatttgtac	tacttcagcc	aatctgtgaa	3720
tgtaaaaact	acactgtttgc	cttgctagga	tccaccctcc	tataatatgg	aacaaatatc	3780
tgaatgaaat	ccaccctagg	agacggagtc	aaactaaact	tgtgggtttt	catttaactt	3840
ttgactacag	catggcccca	tggcatccac	accaagaggg	tgttgatgat	aggtgccggt	3900
gtgcaaaggg	aacttttagtt	tttccactgg	ttcttatctg	ctagcctttt	acatacatgt	3960
gtactatatt	tgtttataga	ctgtaggtgg	atatataatt	taaaagcttg	atttaataaa	4020
catttaaccc	cctaaacttg	ggg				4043

<210> 7

<211> 2491

<212> DNA

<213> Homo sapiens

<400> 7

ctggcaggca	ggactgggat	cgaggcccag	aaaacggagc	agcgggcacc	agggaggcct	60
ggaacggggc	gagcgccatg	agcaacaaat	gcgacgtggg	cgtgggtggg	ggcggcatct	120
caggtatggc	agcagccaaa	cttctgcatg	actctggact	gaatgtgggt	gttctggaag	180

ccccgggaccg	tgtgggagggc	aggacttaca	ctcttaggaa	ccaaaagggt	aaatatgtgg	240
accttggagg	atcctatgtt	ggaccaaccc	agaatcgtat	cttgagatta	gccaaggagc	300
taggattgga	gacctacaaa	gtgaatgagg	ttgagcgtct	gatccaccat	gtaaagggca	360
aatcataccc	cttcaggggg	ccattcccac	ctgtatggaa	tccaattacc	tacttagatc	420
ataacaactt	ttggaggaca	atggatgaca	tggggcgaga	gattccgagt	gatgccccat	480
ggaaggctcc	ccttgcagaa	gagtgggaca	acatgacaat	gaaggagcta	ctggacaagc	540
tctgctggac	tgaatctgca	aagcagcttg	ccactctctt	tgtgaacctg	tgtgtcactg	600
cagagaccca	tgaggtctct	gctctctggt	tcctgtggta	tgtgaagcag	tgtggaggca	660
caacaagaat	catctcgaca	acaaatggag	gacaggagag	gaaatttgtg	ggcggatctg	720
gtcaagtgag	tgagcggata	atggacctcc	ttggagaccg	agtgaagctg	gagaggcctg	780
tgatctacat	tgaccagaca	agagaaaatg	tccttgtgga	gaccctaaac	catgagatgt	840
atgaggctaa	atatgtgatt	agtgtctattc	ctcctactct	gggcatgaag	attcacttca	900
atccccctct	gccaatgatg	agaaaccaga	tgatcactcg	tgtgcctttg	ggttcagtca	960
tcaagtgtat	agtttattat	aaagagcctt	tctggaggaa	aaaggattac	tgtggaacca	1020
tgattattga	tggagaagaa	gctccagttg	cctacacggt	ggatgatacc	aaacctgaag	1080
gcaactatgc	tgccataatg	ggatttatcc	tggccccaaa	agccagaaaa	ctggcacgtc	1140
ttaccaaaga	ggaaagggtg	aagaaaacttt	gtgaactcta	tgccaagggt	ctgggttccc	1200
tagaagctct	ggagccagtg	cattatgaag	aaaagaactg	gtgtgaggag	cagtactctg	1260
ggggctgcta	cacaacttat	ttccccctcg	ggatcctgac	tcaatatgga	agggttctac	1320
gccagccagt	ggacaggatt	tactttgcag	gcaccgagac	tgccacacac	tggagcggct	1380
acatggaggg	ggctgtagag	gccggggaga	gagcagcccg	agagatcctg	catgccatgg	1440
ggaagattcc	agaggatgaa	atctggcagt	cagaaccaga	gtctgtggat	gtccctgcac	1500
agcccatcac	caccaccttt	ttggagagac	atttgccctc	cgtgccaggc	ctgctcaggc	1560
tgattggatt	gaccaccatc	ttttcagcaa	cggtctcttg	cttcctggcc	cacaaaaggg	1620
ggctacttgt	gagagtctaa	agagagaggg	tgtctgtaat	cacactctct	tcttactgta	1680
tttgggatat	gagtttgggg	aaagagttgc	aagtaaagtt	ccatgaagac	aaatagtgtg	1740
gagtgaggcg	ggggagcatg	aagataaatc	caactctgac	tgtaaaatac	aatggatatct	1800
ctttctccgt	tgtggccctt	gcttagtgtc	ccttacctgg	cttagcgttc	tgtttcacca	1860
gtttccaagt	ttattgacct	caaatcttta	gaatagttaa	attggcttgt	ttaaggttct	1920

tgctgcccc	caacacacct	tgcccatgca	caggatgaat	tttttcctac	cattatggct	1980
ttgtgcttgt	tcttcctctt	acctgtatag	cctcacttcc	ctagttcttt	gcattcgtcc	2040
ttaggtactg	tattgtttaca	gctgaaagac	agtaaagacc	atttagtcct	caccttctgt	2100
tttagagttg	agcaaactga	agccacaga	gggtggaactt	aattacctaa	gagccacaat	2160
aagccactgg	tatctggggg	actagaacac	aaataattgc	ttttcccacc	tctttggatg	2220
ttttcccaa	ttatcctcct	tcactccctg	tcatagttac	cgatgggtgc	ccgttgtgtg	2280
ggtttactct	gtgctaagtt	gtcttacact	tctcaaagtc	tactcagtat	atagccttaa	2340
ctcttactgt	tttgtgcggt	gtgtctccag	ctgattttta	cttttttgat	ggtagaaatt	2400
ttatctcttc	ttccttttgt	atcctccatt	gtatcttcat	acaaaggaca	gtacacactt	2460
gggtaattaa	aaataaaaagt	tgattgacca	t			2491

<210> 8

<211> 7258

<212> DNA

<213> Homo sapiens

<400> 8

ttcaatagga	agcaccaaca	gtttatgccc	taggactttg	ttcccacaat	cctgtaacat	60
catatcacga	cacctaacc	aatccttatc	aagccctgtc	aaaaacggac	tttaaacc	120
gctgcaaatt	ttcagtaate	tggccttgcc	tttccccctc	tgatagcacc	atcaaacaaa	180
cccccttact	gccgaaagca	ataagcccgg	ctttgttcca	tccactgggt	gtgttggtga	240
tatctgggga	ctgccactga	acagacgcac	agagggagcc	cctacaggca	ggggtttttc	300
tgtctgtgct	tcttgggaga	gtatgtctcg	tacatttgtc	gcgtgatgaa	gacttcacag	360
ctccatccag	cgaccagact	cacagctcca	tccagctgcg	gcaagggggg	ctgaggcagt	420
cttaggcaag	ttggggccca	gcgggagaag	ttgcagaaga	actgattaga	ggaccagga	480
ggcttcagag	ctgggctgag	gtagagagtc	tcctgtgcgc	cttctctcct	ctctgcaatt	540
cggggactcc	ttgcactggg	gcaggccccg	gcagggtgcat	gggaggaagc	acggagaatt	600
tacaagcctc	tcgattcctc	agtccagacg	ctgttgggtc	ccctccgctg	gagatcgcg	660
ttccccaaa	tctttgtgag	cgttgcggaa	gcacgcgggg	tccgggtcgc	tgagcgctgc	720
aagacagggg	agggagccgg	gcgggagagg	gaggggcggc	gccggggcgg	gccctgatat	780
agagcaggcg	ccgcgggtcg	cagcacagtc	ggagaccgca	gcccgagacc	cgggccaggg	840
tccacctgtc	cccgcagcgc	cggctcgcgc	cctcctgcgc	cagccaccgg	tgagtgccgc	900

ggtcctgaga	tccccgggccc	ggatgcgcgg	cggccccagc	tcccgagcgt	ctgcctgccc	960
cgccttgggc	tgccccgggct	ccctgggctc	cccggcggct	gcacggagtc	aaggcgcccc	1020
gtccccgggcg	tccccgcgg	gtgccgatcc	aggctgccccg	gagtccggag	cccatagagg	1080
agagagacag	ctggggagccc	tggtcaccgc	gggcatctcc	cctgcgctgc	agtcgccccgc	1140
ctggcctgcc	ttcccgttcc	tccgcctctt	gccctgactt	ctccttcctt	tgcagagccg	1200
cgtctagcg	ccccgacctc	gccaccatga	gagccctgct	ggcgcgcctg	cttctctgcg	1260
tcctggtcgt	gagcgactcc	aaagtgagtg	cgctcttgct	ttgactgatg	ctgcccgaagg	1320
acctctgata	agcaccaggg	gagaggagg	gctgctcagg	gagctggggg	ctccggattc	1380
catccacagc	agggccagac	tctccccagg	aaatgggaca	gggtggcagc	ggaggcttga	1440
gaaccacggg	ggttggcact	ggctggcaag	ggaggaagag	ggccaccggg	actgccccag	1500
cctgcgggca	tctggtagat	gaagcttaat	ccatttctcc	tggctggaaa	ccatggtctt	1560
ccatttgaga	actagatacg	aacagggtga	ggcgagagg	agagggaaga	gtgggttttg	1620
ggattggggc	cagtttacc	tcaccctgga	tccctggagc	atgggacctt	tgatgaagcc	1680
tcctcccgaa	tctcttccag	ggcagcaatg	aacttcatca	agttccatgt	gagtatccac	1740
ccctacaaca	gttggctgca	cagacaagtt	gggaaggctt	caggggacac	tcccctccct	1800
gccctctgct	gcagcgtgcg	ccaccctta	ccacttccac	tccccctcgc	ttacccacc	1860
tttgttctct	ccagcgaact	gtgactgtct	aaatggagga	acatgtgtgt	ccaacaagta	1920
cttctccaac	attcactggg	gcaactgccc	aaagaaattc	ggagggcagc	actgtgaaat	1980
aggatatggg	atctccactg	caactgggag	agaaatttgg	ggacagggag	ggatgggtgg	2040
gaggcaagag	caggcaggag	ttaggagctg	gaggtagggg	gggtgacatc	ttcatcccta	2100
tgtgacaagc	ataaacacac	acacacgctc	acgaaacagt	ggccacacaa	atgtgaggtg	2160
gggttggaag	gagaccctgt	ccagtcttct	ggcaggtctg	aaacgacatc	tttaaaatgt	2220
cgttggcag	cggggcatgg	tggctcacgc	ttgtaatccc	agcattttga	gagggtcaagt	2280
ttgagtggat	catttaggtc	aggagttcaa	gaccagcctg	gacaacatgg	tgtaaccctg	2340
cctctactaa	aaatgcaaaa	atcagcctgg	catggtgggtg	gatgcctgta	gtcccagcta	2400
cttggggaggc	tgaggcagga	gaattgcttg	aacatgggag	gccagatctc	agtgagctga	2460
gatcacacca	ctgcactcca	actgggcgac	agagcaagac	tccatctcaa	aaaaaaaaaa	2520
aaataaaagt	tagttggaat	gttcttctct	ttctcatatt	ctctcctcct	cctgtcccct	2580
tgtagataag	tcaaaaacct	gctatgaggg	gaatggtcac	ttttaccgag	gaaaggccag	2640

cactgacacc atggggccggc cctgcctgcc ctggaactct gccactgtcc ttcagcaaac	2700
gtacccatgcc cacagatctg atgctcttca gctgggcctg gggaaacata attactgcag	2760
gtgaggtggg ggcaacaagg accaaaagcc ctccctacag ctcccagaa accttggttac	2820
catccccctt tcccagaggg ctggccatag cacaagagaa gtgcggcctc tgggtgagtc	2880
ttccctgagg ggaggaggca gggaaggccc tctgggttgg aatgacatcc cctatctttc	2940
tgtgttgtgc caggaacca gacaaccgga ggcgaccctg gtgctatgtg caggtgggccc	3000
taaagccgct tgtccaagag tgcattggtg atgactgcgc agatggtgag catcactgac	3060
ctgctgatga caggtgggtg gaaggggaca aacttacatg tccccctatt ccatcacagg	3120
aggactgagg aggtgggggg tgcccagag ggatgctttc tccctacctg ctccctaaga	3180
catccctctg tttgtcctcc aggaaaaaag ccctcctctc ctccagaaga attaaaattt	3240
cagtgtggcc aaaagactct gagggcccg c tttaagatta ttgggggaga attcaccacc	3300
atcgagaacc agccctggtt tgcggccatc tacaggaggc accggggggg ctctgtcacc	3360
tacgtgtgtg gaggcagcct catgagccct tgctgggtga tcagcgccac aactgcttc	3420
atgtacggcc ctgggtttct cctcttcgac tcttctgccc caccccaagc acatcccttt	3480
ctccttccca gcaaagtgtt ccgcctcatt tctccctcat ctgcccctgt ccatgcgccc	3540
atggccttgg ggacaagtgc tgctttgagg cctctaggga gggaaggaag aagtggcatg	3600
atttcatggg actaagctgt ttgatgggta tcttcttcca cagtgattac ccaaagaagg	3660
aggactacat cgtctacctg ggtcgctcaa ggcttaactc caacacgcaa ggggagatga	3720
agtttgaggt ggaaaacctc atcctacaca aggactacag cgctgacacg cttgctcacc	3780
acaacgacat tgggtgagggg gaacgcccgc gactactgtg gccataatgg cttggggaga	3840
gtgggaccca gggagagact ggagctgagt tgaagctgcc ggtggggcag ggggtggggc	3900
agggaccttg aagcctcgat atacatgaca aaggatggca gggaagagtt ccatgaagtc	3960
tgaggggcct ggtgctcctc tggagagacc ctgaatttcc ccaacaagta gccctcttgc	4020
gagtggaaac agccctgtgg gtatatggct tgggctggga aggcctgtt tatatgaatt	4080
agaaaaagac acaccttctt ttgtgggatg cagcctctgt ctgtgctagg atatagaact	4140
tggagaatgg agccttggga tggattccag cctaactacc tcagggggat cctctagagt	4200
gcagctggga gtttttgcag aaacgacctg tacagctgta tgcagtggct ctggccatcc	4260
aagccttttt caacacctgg aacaaagccc ttggggcatg gggcagggga ggtttccagg	4320
tgataagcga ccagcagacc tccctggatg actgacctag ggataggcat agctacttcc	4380

tcggcacttg	gaggggacag	atggggaccg	cctaaccagt	agtgatcttt	ctcctctgac	4440
cctctgtcct	ccccagcct	tgctgaagat	ccgttccaag	gagggcaggt	gtgcgagcc	4500
atccccggact	atacagacca	tctgcctgcc	ctcgatgtat	aacgatcccc	agtttggcac	4560
aagctgtgag	atcactggct	ttggaaaaga	gaattctagt	aagtgacaat	tgcgactgac	4620
ttagaaggtc	ctgaggagt	ttttgacctg	aaaatgagcc	cagtgtgatc	aaggggaagac	4680
tgagaggtta	gaggtgggag	cactgaggcg	gtggcagatg	gggccaggga	tggatgaaga	4740
gtgttggtta	gggagcgatg	ggctgcaaag	gtaaatagat	ggtaggggct	ataggtggag	4800
gtaaatggct	cagatttgca	tggagagaga	ataatgggccc	tctccctggg	tgatgatact	4860
ttatggtgtc	ccctctctgg	cgagacgtcc	cacgtggagg	cagataaatc	ttgatgcaaa	4920
cgctccctg	ttttctccac	ctagccgact	atctctatcc	ggagcagctg	aaaatgactg	4980
ttgtgaagct	gatttccac	cgggagtgtc	agcagcccca	ctactacggc	tctgaagtca	5040
ccacccaaat	gctgtgtgct	gctgaccac	agtggaaaac	agattcctgc	caggtgagt	5100
ttccaagcat	ctctctccac	ctcttccata	tctcccaga	gctcctgggc	ttgttccagc	5160
cagcttaagg	gtgtctctct	ctagccaaag	ccctaagtag	ccagaatcag	gagctcaggt	5220
ctttgagggt	ttaaaccagt	ccttatgtgt	ttgccagaca	ttacccaaaa	aatcccagct	5280
ctgcgctagt	cacttcagac	tgggggcacg	agatcctaga	aagaggaaac	agtaaaagac	5340
aatgtaactc	agtgccagag	gtgtgttgtg	aactataaat	gatcaggtgt	tcaggagagg	5400
gaggtgagt	ccaacctgag	ggtcaggag	gggaggcttt	aaaggaaatg	tgacttgata	5460
ggcatttgaa	gaggcagagg	gaagaaagga	aggtgtttca	gttgaaagat	acaaaactga	5520
gaaggaggct	ggcatattcc	gggtggggag	gagaactagg	gtctgggagt	gtggatggaa	5580
tagtggcaga	tgacagggt	tttaaagcca	agcaggggat	tttccaaact	cgatgtggta	5640
gaaatggggc	tgcgtcaggc	acagtggctc	atgcctgtaa	tcccagcatt	gggctaggcc	5700
gtagtcgatg	gatcattgag	gccagagttg	agaccggcct	ggaccaacat	ggtgaaaccc	5760
tgtgtctact	aaaaaatgca	aaaaaaaaaa	ttagccaggt	gtggtggtgc	ctgcctgtaa	5820
tcccagctaa	tcaggaggct	gagacatgga	atcgcttgag	cacaggaggc	aagtttgacg	5880
tgagctgaga	tcacgtcatt	gcacgccagc	ctgggcgaca	gagcgagatt	ctgtcctccc	5940
gccgaaaaaa	gaaagaaaat	gggaagtcgc	taaggacttt	gactgggaaa	ctcttccctc	6000
tctctggtat	ggttgggtga	tgggatcaga	aatccccctc	tcacttctct	agggctcatc	6060
ttttgtatct	ttggcgctac	aggagactc	agggggaccc	ctcgtctgtt	ccctccaagg	6120

ccgcatgact	ttgactggaa	ttgtgagctg	gggccgtgga	tgtgccctga	aggacaagcc	6180
aggcgtctac	acgagagtct	cacacttctt	accctggatc	cgcagtcaca	ccaaggaaga	6240
gaatggcctg	gccctctgag	ggtccccagg	gaggaaacgg	gcaccacccg	ctttcttgct	6300
ggttgctcatt	tttgagtag	agtcactctc	atcagctgta	agaagagact	gggaagatag	6360
gctctgcaca	gatggatttg	cctgtgccac	ccaccagggt	gaacgacaat	agctttaccc	6420
tcaggcatag	gcctgggtgc	tggctgcca	gacccctctg	gccaggatgg	aggggtggtc	6480
ctgactcaac	atgttactga	ccagcaactt	gtctttttct	ggactgaagc	ctgcaggagt	6540
taaaaagggc	agggcactct	ctgtgcatgg	gtgaaggagg	agccagctcc	cccgacgggtg	6600
ggcatttggtg	aggcccatgg	ttgagaaatg	aataatttcc	caattaggaa	gtgtaacagc	6660
tgaggtctct	tgaggagct	tagccaatgt	gggagcagcg	gtttggggag	cagagacact	6720
aacgacttca	gggcagggct	ctgatattcc	atgaatgtat	caggaaatat	atatgtgtgt	6780
gtatgtttgc	acacttggtg	gtgggctgtg	agtgtgaagt	tgagtaagag	ctggtgtctg	6840
attgttaagt	ctaaatattt	ccttaaactg	tgtggactgt	gatgccacac	agagtgggtct	6900
ttctggagag	gttataggct	actcctgggg	cctcttgggt	ccccacgtg	acagtgcctg	6960
ggaatgtact	tattctgcag	catgacctgt	gaccagcact	gtctcagttt	cactttcaca	7020
tagatgtccc	tttcttggcc	agttatccct	tccttttagc	ctagttcatc	caatcctcac	7080
tgggtggggg	gaggaccact	ccttacctg	aatatttata	tttcaactatt	tttatttata	7140
tttttgtaat	tttaaataaa	agtgatcaat	aaaatgtgat	ttttctgatg	acaaatctcc	7200
ctggtgcttg	tatgggaagg	agttggagta	cataaaaagg	agaaaataac	aaagggtgg	7258

<210> 9

<211> 981

<212> DNA

<213> Homo sapiens

<400> 9

aagaatgtgg	caaaggcttt	agtatattct	caacccttac	taaacataag	ataattcata	60
ctggagagaa	accctacaaa	tgcaatgaat	gtggtaaagc	ctttaactgg	tcctcaactc	120
ttactaaaca	taagagaatt	catactggag	agaaacccta	caaatgtgaa	gaatgtggca	180
aagcttttaa	ccagtcctca	acccttacta	gacataagat	agttcatact	ggagagaaac	240
cctacaaatg	tgaagaatgt	ggtaaagcct	ttaaacggtc	cacaactcta	aaacataaga	300
gaatttatac	taaagagaaa	ccatacaaat	gtgaagaatg	tggaaaagcc	tttagtgtat	360
tctcaaccct	tactaaacat	aagataattc	atactggagc	aaaaccttac	aatgtgacg	420

```

aatgtggcag tgccttttagg gcattctcaa cccttactga acataagaga gttcatactg 480
gagagaaacc ttacaaatgc aatgaatgtg gtaaagcctt taactgggcc tcaactctta 540
ctaaacataa gagaattcat actggagaga agccctacaa atgtgaagaa tgtggcaaag 600
cttttaaccg gtccctcaaac cttactcgac ataagaaaat tcatactgga gagaaaccat 660
acaaacctaa aagatgtgac agtgcttttg acaacacccc aaacttttct agacataaaa 720
gaaatcatat ggggtgagaaa tcctagaaat gtgaagaatg tgacaaagcc tttaagcggg 780
tgtcacactt gattgtatat aagataattc atactggaga aaactcccag aagtgtgaca 840
aatgtgacaa aacatttaat taattctcat accttattgc acaggaaagc atttatactt 900
gagaaaaatt gtataaagaa tggaaaagtc attaatatct gtcatatct taacatcagc 960
gagttgggtat ttaataaaag c 981

```

<210> 10

<211> 348

<212> DNA

<213> Homo sapiens

<220>

<221> modified_base

<222> (92)..(92)

<223> a, c, t, g, unknown or other

<220>

<221> modified_base

<222> (178)..(178)

<223> a, c, t, g, unknown or other

<220>

<221> modified_base

<222> (192)..(192)

<223> a, c, t, g, unknown or other

<220>

<221> modified_base

<222> (203)..(203)

<223> a, c, t, g, unknown or other

<220>

<221> modified_base

<222> (227)..(227)

<223> a, c, t, g, unknown or other

<220>

<221> modified_base

<222> (233)..(233)

<223> a, c, t, g, unknown or other

<220>
 <221> modified_base
 <222> (240)..(240)
 <223> a, c, t, g, unknown or other

<220>
 <221> modified_base
 <222> (253)..(253)
 <223> a, c, t, g, unknown or other

<220>
 <221> modified_base
 <222> (265)..(265)
 <223> a, c, t, g, unknown or other

<220>
 <221> modified_base
 <222> (278)..(278)
 <223> a, c, t, g, unknown or other

<220>
 <221> modified_base
 <222> (282)..(282)
 <223> a, c, t, g, unknown or other

<220>
 <221> modified_base
 <222> (311)..(311)
 <223> a, c, t, g, unknown or other

<220>
 <221> modified_base
 <222> (320)..(320)
 <223> a, c, t, g, unknown or other

<400> 10
 tagagagcac taaacagaga gtgagaagac cttaaatttta gtcccatgtc ctgtcataat 60
 catgcatagt gactctgggc ttcccttatac tngaaaatga tattggaccg tgatggtgat 120
 ctatgtttta ggatcccctc caactttaag tgattacatt atagacagaa tgtgtttngt 180
 ctttccattg anagcgtatc tngtggatct ttcattatcc ttatctnaca gtnaggtatn 240
 ttctttacta tagnaagcaaa ataanctgct gaaatgantt gngcttctgg ttaatcaatc 300
 tttatttccct ntgtgtagan aattgcctca cttacagcaa cccccctc 348

<210> 11
 <211> 3931
 <212> DNA
 <213> Homo sapiens

<400> 11
 gccccggcgc tctcagcagg atggccaaca ccttccctct ccatccatac accccgcgcg 60
 cccttgcccc gtggccgcgc tcggttcccg cactgctcat tccacccctt acatcccagc 120

ccgctgccag	agccggggag	agggcggggg	ccgctggggc	gaggccgtga	acagcggctg	180
tcacgtgggc	cgcccaggcc	aataggggtg	aggctttggg	tcgagctcag	tcctcccccg	240
gcgcctccga	ctggcagtgg	gactcagcgg	gcgtggaggt	cgcggtgag	cgagcgagcc	300
ctgggcgagt	gaattgtggc	tgtgggttga	cggtggagac	accccccgga	gggaggcgga	360
gggaagggag	gcgaggcctc	gacctgcatg	cttcccgcct	cccactcccc	agcgcccccg	420
gaccgtgcag	ttctctgcag	gaccaggcca	tggagctcga	agtccggcgg	gtccgacagg	480
cgttcctgtc	cggccgggtc	cgacctctgc	ggtttcggct	gcagcagctg	gaggccctgc	540
ggaggatggt	gcaggagcgc	gagaaggata	tcctgacggc	catcgccgcc	gacctgtgca	600
agagtgaatt	caatgtgtac	agtcaggaag	tcattactgt	ccttggggaa	attgatttta	660
tgcttgagaa	tcttcctgaa	tgggttactg	ctaaaccagt	taagaagaac	gtgctcacca	720
tgctggatga	ggcctatatt	cagccacagc	ctctgggagt	ggtgctgata	atcggagctt	780
ggaattaccc	cttcgttctc	accattcagc	cactgatagg	agccatcgct	gcaggaaatg	840
ctgtgattat	aaagccttct	gaactgagtg	aaaatacagc	caagatcttg	gcaaagcttc	900
tccctcagta	tttagaccag	gatctctata	ttgttattaa	tggtggtggt	gaggaaacca	960
cggagctcct	gaagcagcga	tttgaccaca	ttttctatac	gggaaacact	gcggttggca	1020
aaattgtcat	ggaagctgct	gccaagcatc	tgaccctgtg	gactcttgaa	ctgggagggga	1080
aaagtccatg	ttatattgat	aaagattgtg	acctggacat	tgtttgcaga	cgcataacct	1140
ggggaaaata	catgaattgt	ggccaaacct	gcattgcacc	cgactatatt	ctctgtgaag	1200
catccctcca	aaatcaaatt	gtatggaaga	ttaaggaaac	agtgaaggaa	ttttatggag	1260
aaaatataaa	agagtctcct	gattatgaaa	ggatcatcaa	tcttcgtcat	tttaagagga	1320
tactaagttt	gcttgaagga	caaaagatag	cttttggtgg	ggagactgat	gaggccacac	1380
gctacatagc	cccaacagta	cttaccgatg	ttgatcctaa	aaccaagggtg	atgcaagaag	1440
aaatTTTTTg	accaattctt	ccaatagtgc	ctgtgaaaaa	tgtagatgag	gccataaatt	1500
tcataaatga	acgtgaaaag	cctctggctc	tttatgtatt	ttcgcataac	cataagctca	1560
tcaaacggat	gattgatgag	acatccagtg	gagggtgcac	aggcaatgac	gtcattatgc	1620
acttcacgct	caactctttc	ccatttggag	gagtgggttc	cagtgggatg	ggagcttata	1680
acggaaaaca	tagttttgat	actttttctc	atcagcgtcc	ctgtttatta	aaaagtttaa	1740
agagagaagg	tgctaacaaa	ctcagatatc	ctcccaacag	ccagtcaaag	gtggattggg	1800
gaaaatTTTT	tctcttgaaa	cggttcaaca	aagaaaaact	cggctctctg	ttgctcactt	1860

tcctgggtat	tgtagccgct	gtgcttgtca	aggcagaata	ttactgaaga	atgatcctgt	1920
tcaacctcct	agtgcctcta	ctgaattatt	cctcttttaa	atggttaatg	aaccaataat	1980
ttttaaatca	taccāaaaat	agtaagaaaa	tatgcaaaca	ctctgtgatc	aaacttaaaa	2040
gtcattgcca	ttcatcatta	ataaaagttg	ccatttcaac	tacgtcccaa	cattccctaa	2100
tagggatttc	agggaacctg	tcttaaattg	tgcttatcta	aatcttggaa	ctttgagcta	2160
ggggaggaga	atgtattaga	ctaaatacaa	actgcggggg	tgtaaggagg	tctcagaacc	2220
tcactgaatc	cttcaactca	gttaatggca	ctgctcactt	cctgcctctg	ctgccaccat	2280
cactgtgtga	agctttcaag	agcttggtac	ttcccagggc	taccggcagt	cctctgtagt	2340
ccagagaggt	gagattagat	cttcttggtt	ccctgtgagg	tttcaggcac	taaaactcta	2400
tgtggggaag	ggaggggtta	ctcctcctcc	aatgggactc	aaggacttga	cctccaggag	2460
taggccccctg	gtcagaagtg	ccatctcacc	agtggctctc	attcttccctc	attcattctt	2520
tatcatcctg	tgttctgttt	agttgcaaca	atctcttggtg	actaatgtca	ctcaaagcat	2580
cttgtaacct	agggtctcct	ggaagttagt	tgccaaagtc	atgcaagcat	cacctgtcat	2640
tcttggtgtg	gagttataga	attctacatc	ttataaaaacc	taactggcat	ttaaaaaata	2700
ctgtggccgg	gcgtgggtggc	tcatgcctgt	aatcccagca	ctttgggagg	ccgagggtggg	2760
aggattgctt	gagtccagga	atttgagacc	agcctggaca	acacagttag	acctcatctc	2820
tatcaaaaaa	taaaaattag	ctagatgtgg	tggcatgagc	ctgtgttccc	agctgcttag	2880
gaggctgaag	caggaggatt	gattgagcct	gcgaggccaa	ggctgcagca	ggctgtgatt	2940
gcaccactgc	acttcagctt	gggcaacaga	gcaagaccct	gtctccgaaa	caaataaaaa	3000
atactgtaat	aaaagtactt	ataaacatac	taatcctctt	tcaggaccct	aaagttgcag	3060
gttagtaggt	cttcaaggac	aaatctgtaa	gtttcttttc	tgtagtgcaa	gtaaaatttc	3120
actttttgaa	actatagaga	gatccctttc	tgattagcct	acagaactta	aagtgaggga	3180
accatttcct	ctcacagaca	aagaggcctg	ggatattagg	actttggggg	ttgagagcat	3240
catggggcag	acagatggtg	gatggctctg	acaagaagcg	agtaagccac	tgcggttggt	3300
catactgaag	ggaattgatg	gcaagaggat	cccctgagca	agtcagaagt	tactctcatc	3360
agtcgttcat	ggtcacaacc	tgaggtactc	tgctgagtgg	gcaaggctga	agtaagaggc	3420
ctgtggaatg	cagcattacc	tgctggacag	agcagggcag	gcagttctat	gccttgagac	3480
tcctgactgc	agggactctg	tccccacact	cagaaagact	cagctcactc	aatgagagaa	3540
tgtgatttac	tttatagaac	gtataatcaa	ctttgttgaa	taatttgttc	tattaaggct	3600

gtctaaaatg tgatgtcttc atcatagtat gaagtgttga aaattaataa cgagcctagt	3660
ttaggaaaaa gctgcttaaa actgtggctc taagagagta atcataaaat accttagata	3720
aaattgcact atggaatttt cattgagtat gtttaaatta ttggcttgtc tactaataca	3780
tctgcttcaa aatgaacata tttcataaaa ttggcatcaa ttttaatgac gctcctggta	3840
tggaacctca gatataacct attggagaca atcctttgat cataaattct ccccaactat	3900
aatcatttt atgtctttaa aaaaaaaaaa a	3931

<210> 12

<211> 2191

<212> DNA

<213> Homo sapiens

<400> 12

tcgagcggcc acccgggcag gtctctgggt gaatagcagc gtgtccgccg gcagcgaacc	60
gagaccagcg agccgaccat gcggctgcac agacttcgtg cgcggctgag cgcggtggcc	120
tgtgggcttc tgctgcttct tgtccggggc cagggccagg actcagccag tcccatccgg	180
accacacaca cggggcaggt gctggggagt cttgtccatg tgaagggcgc caatgccggg	240
gtccaaacct tcctgggaat tccatttgcc aagccacctc taggtccgct gcgatttgca	300
ccccctgagc cccctgaatc ttggagtggg gtgagggatg gaaccaacca tccggccatg	360
tgtctacagg acctcaccgc agtggagtca gaggttctta gccagttcaa catgaccttc	420
ccttccgact ccatgtctga ggactgcctg tacctcagca tctacacgcc ggcccatagc	480
catgaaggct ctaacctgcc ggtgatgggt tggatccaag gtgggtgcgt tgtttttggc	540
atggcttcct tgtatgatgg ttccatgctg gctgccttgg agaacgtggg ggtgggtcatc	600
atccagtacc gcctgggtgt cctgggcttc ttcagcactg gagacaagca cgcaaccggc	660
aactggggct acctggacca agtggctgca ctacgctggg tccagcagaa tatcgccac	720
tttgagggca acctgaccg tgtcaccatt tttggcgagt ctgcgggtgg cacgagtgtg	780
tcttcgcttg ttgtgtcccc catatcccaa ggactcttcc acggagccat catggagagt	840
ggcgtggccc tcctgcccgg cctcattgcc agctcagctg atgtcatctc cacgggtggg	900
gccaacctgt ctgcctgtga ccaagttgac tctgaggccc tgggtgggctg cctgcggggc	960
aagagtaaag aggagattct tgcaattaac aagcctttca agatgatccc cggagtgggtg	1020
gatggggctc tcctgcccag gcacccccag gagctgctgg cctctgccga ctttcagcct	1080
gtccctagca ttgttgggtg caacaacaat gaattcggct ggctcatccc caaggtcatg	1140

aggatctatg ataccagaa ggaaatggac agagaggcct cccaggctgc tctgcagaaa	1200
atgttaacgc tgctgatgtt gcctcctaca tttggtgacc tgctgagggg ggagtacatt	1260
ggggacaatg gggatcccca gaccctccaa gcgcagttcc aggagatgat ggcggactcc	1320
atgtttgtga tccctgcact ccaagtagca cattttcagt gttcccgggc ccctgtgtac	1380
ttctacgagt tccagcatca gccagctgg ctcaagaaca tcaggccacc gcacatgaag	1440
gcagaccatg gtgatgagct tccttttgtt ttcagaagtt tctttggggg caactacatt	1500
aaattcactg aggaagagga gcagctaagc aggaagatga tgaagtactg ggccaacttt	1560
gcgagaaatg ggaaccccaa tggcgagggt ctgccacact ggccgctgtt cgaccaggag	1620
gagcaatacc tgcagctgaa cctacagcct gcggtgggcc gggctctgaa ggcccacagg	1680
ctccagttct ggaagaaggc gctgccccaa aagatccagg agctcgagga gcctgaagag	1740
agacacacag agctgtagct ccctgtgccg gggaggaggg ggtgggttcg ctgacaggcg	1800
agggtcagcc tgctgtgccc acacacaccc actaaggaga aagaagttga ttccttcatt	1860
cacttcgcca ttcattcata cttccgtcca gaagttgatt ccttcattca cttcgccatt	1920
cattcatact tccgtccatc cattcagaaa ccggyattta ttaagaattt actcaggcat	1980
gatggcccat acttgtaatc ccagctattg ggaaggatga gatgggagga tggcttgagg	2040
ccagaggttt gagaccgacc agccagggca acacagtgag accccttctc aaaaaaaaaa	2100
aaaaaaaaag agagagtgtg tgattagaag ctaaatagga aagttttgag cttcaagtca	2160
gtgaggagta aaaaagattt ttaaaaagca a	2191

<210> 13

<211> 1065

<212> DNA

<213> Homo sapiens

<400> 13

gaattaggca cgagagctcc ttgccagctc tctcctcgc acagccgctc gaaccgctg	60
ctgagcccca tggcccgcg cagctctcc gccgccccca gcaatccccg gctcctgcga	120
gtggcgctgc tgctcctgct cctggtggcc gccagccggc gcgcagcagg agcgccctg	180
gccactgaac tgcgctgcca gtgcttgag accctgcagg gaattcacct caagaacatc	240
caaagtgtga aggtgaagtc ccccgaccc cactgcgccc aaaccgaagt catagccaca	300
ctcaagaatg ggcagaaagc ttgtctcaac cccgcatcgc ccatgggttaa gaaaatcatc	360
gaaaagatgc tgaaaaatgg caaatccaac tgaccagaag gaaggaggaa gcttattggg	420
ggctgttcct gaaggagccc tgccttacag gaacagaaga ggaaagagag acacagctgc	480

```

agaggccacc tggattgcgc ctaatgtggt tgagcatcac ttaggagaag ttttctatatt 540
atattatatt ttatttatatt atttggttgt tttagaagat tctatgttaa tattttatgt 600
gtaaaataag gttatgattg aatctacttg cacactctcc cattatatatt attgtttatt 660
ttaggtcaaa cccaagttag ttcaatcctg attcatatatt aatttgaaga tagaagggtt 720
gcagatattc tctagtcatt tgttaatat tcttcgtgat gacatatcac atgtcagcca 780
ctgtgataga ggctgaggaa tccaagaaaa tggccagtaa gatcaatgtg acggcagggg 840
aatgtatgtg tgtctatatt gtaactgtaa agatgaatgt cagttgttat ttattgaaat 900
gatttcacag tgtgtgggtc acatttctca tgttgaagct ttaagaacta aaatgttcta 960
aatatccctt ggacatttta tgtcttttct gtaagatact gccttggtta atgttaatta 1020
tgcagtgttt ccctctgtgt tagagcagag aggtttcgat attta 1065

```

<210> 14
 <211> 556
 <212> DNA
 <213> Homo sapiens

```

<400> 14
ccttgtctga gaccgagcta tgtggggcga cctctggctc ctcccgcctg cctctgccaa 60
tccgggcact gggacagagg ctgagtttga gaaagctgca gaggagggtta ggcaccttaa 120
gaccaagcca tcggatgagg agatgctgtt catctatggc cactacaaac aagcaactgt 180
gggcgacata aatacagaac ggcccgggat gttggacttc acgggcaagg ccaagtggga 240
tgcttgaat gagctgaaag ggacttccaa ggaagatgcc atgaaagctt acatcaacaa 300
agtagaagag ctaaagaaaa aatacgggat atgagagact ggatttggtt actgtgccat 360
gtgtttatcc taaactgaga caatgccttg tttttttcta ataccgtgga tgggtgggaat 420
tcgggaaaat aaccagttaa accagctact caaggctgct caccatacgg ctctaacaga 480
ttaggggcta aaacgattac tgactttcct tgagtagttt ttatctgaaa tcaattaaaa 540
gtgtatttgt tacttt 556

```

<210> 15
 <211> 3345
 <212> DNA
 <213> Homo sapiens

```

<400> 15
gaattccgtc tcgaccactg aatggaagaa aaggactttt aaccaccatt ttgtgactta 60
cagaaaggaa tttgaataaa gaaaactatg atacttcagg cccatcttca ctccctgtgt 120

```


cttcttatgc	tttatttggc	aactggatat	ggccaagagg	ggaagtttag	tggacccctg	180
aaacccatga	cattttctat	ttatgaaggc	caagaaccga	gtcaaattat	attccagttt	240
aaggccaatc	ctcctgctgt	gacttttgaa	ctaactgggg	agacagacaa	catatttgtg	300
atagaacggg	agggacttct	gtattacaac	agagccttgg	acagggaaac	aagatctact	360
cacaatctcc	aggttgcagc	cctggacgct	aatggaatta	tagtggaggg	tccagtcctt	420
atcaccatag	aagtgaagga	catcaacgac	aatcgaccca	cgtttctcca	gtcaaagtac	480
gaaggctcag	taaggcagaa	ctctcgccca	ggaaagccct	tcttgtatgt	caatgccaca	540
gacctggatg	atccggccac	tcccaatggc	cagctttatt	accagattgt	catccagctt	600
cccatgatca	acaatgtcat	gtactttcag	atcaacaaca	aaacgggagc	catctctctt	660
acccgagagg	gatctcagga	attgaatcct	gctaagaatc	cttcctataa	tctgggtgatc	720
tcagtgaagg	acatgggagg	ccagagtggg	aattccttca	gtgataccac	atctgtggat	780
atcatagtga	cagagaatat	ttggaaagca	ccaaaacctg	tggagatggg	ggaaaactca	840
actgatcctc	accccatcaa	aatcactcag	gtgcggtgga	atgatcccg	tgcacaatat	900
tccttagttg	aaaagagaa	gctgccaa	ttcccatttt	caattgacca	ggaaggagat	960
atttacgtga	ctcagccctt	ggaccgagaa	gaaaaggatg	catatgtttt	ttatgcagtt	1020
gcaaaggatg	agtacggaaa	accactttca	tatccgctgg	aaattcatgt	aaaagttaaa	1080
gatattaatg	ataatccacc	tacatgtccg	tcaccagtaa	ccgtatttga	gggccaggag	1140
aatgaacgac	tgggtaacag	tatcgggacc	cttactgcac	atgacaggga	tgaagaaaat	1200
actgccaa	gttttctaaa	ctacaggatt	gtggagcaaa	ctcccaaact	tcccatggat	1260
ggactcttcc	taatccaaac	ctatgctgga	atgttacagt	tagctaaaca	gtccttgaag	1320
aagcaagata	ctcctcagta	caacttaacg	atagaggtgt	ctgacaaaga	tttcaagacc	1380
ctttgttttg	tgcaaatcaa	cgttattgat	atcaatgatc	agatcccat	ctttgaaaaa	1440
tcagattatg	gaaacctgac	tcttgctgaa	gacacaaaca	ttgggtccac	catcttaacc	1500
atccaggcca	ctgatgctga	tgagccattt	actgggagtt	ctaaaattct	gtatcatatc	1560
ataaaggagg	acagtgaggg	acgcctgggg	gttgacacag	atccccatac	caacaccgga	1620
tatgtcataa	ttaaaaagcc	tcttgatttt	gaaacagcag	ctgtttccaa	cattgtgttc	1680
aaagcagaaa	atcctgagcc	tctagtgttt	gggtgtgaagt	acaatgcaag	ttcttttgcc	1740
aagttcacgc	ttattgtgac	agatgtgaat	gaagcacctc	aattttccca	acacgtattc	1800
caagcgaaag	tcagtgagga	tgtagctata	ggcactaaag	tgggcaatgt	gactgccaag	1860

gatccagaag gtctggacat aagctattca ctgaggggag acacaagagg ttggcttaaa	1920
attgaccacg tgactggtga gatctttagt gtggctccat tggacagaga agccggaagt	1980
ccatatcggg tacaagtggg ggccacagaa gtaggggggt cttccttaag ctctgtgtca	2040
gagttccacc tgatccttat ggatgtgaat gacaaccctc ccaggctagc caaggactac	2100
acgggcttgt tcttctgcca tcccctcagt gcacctggaa gtctcatttt cgaggctact	2160
gatgatgatc agcacttatt tcgggggtccc cattttacat tttccctcgg cagtggaagc	2220
ttacaaaacg actgggaagt ttccaaaatc aatggtactc atgcccgact gtctaccagg	2280
cacacagact ttgaggagag ggcgtatgtc gtcttgatcc gcatcaatga tgggggtcgg	2340
ccacccttgg aaggcattgt ttctttacca gttacattct gcagttgtgt ggaaggaagt	2400
tgtttccggc cagcaggtca ccagactggg ataccactg tgggcatggc agttggtata	2460
ctgctgacca cccttctggt gattggtata attttagcag ttgtgtttat ccgcataaag	2520
aaggataaag gcaaagataa tgttgaaagt gctcaagcat ctgaagtcaa acctctgaga	2580
agctgaattt gaaaaggaat gtttgaattt atatagcaag tgctatttca gcaacaacca	2640
tctcatccta ttaacttttca tctaacgtgc attataattt tttaaacaga tattccctct	2700
tgtcctttaa tatttgctaa atatttcttt tttagagggtg agtcttgctc tgtcgcccag	2760
gctggagtac agtgggtgta tcccagctca ctgcaaccctc cgctcctcgg gttcacatga	2820
ttctcctgcc tcagcttctt aagtagctgg gtttacaggc acccaccacc atgccagct	2880
aatttttgta tttttaatag agacgggggt tcgccatttg gccaggctgg tcttgaactc	2940
ctgacgtcaa gtgatctgcc tgccttggtc tccaataca ggcatgaacc actgcacca	3000
cctacttaga tatttcatgt gctatagaca ttagagagat ttttcatttt tccatgacat	3060
ttttcctctc tgcaaagggc ttagctactt gtgtttttcc cttttggggc aagacagact	3120
cattaaatat tctgtacatt ttttctttat caaggagata tatcagtgtt gtctcataga	3180
actgcctgga ttccatttat gttttttctg attccatcct gtgtcccctt catccttgac	3240
tcctttggta tttcactgaa tttcaaacat ttgtcagaga agaaaaaagt gaggactcag	3300
gaaaaataaa taaataaaag aacagccttt tgcggccgcg aattc	3345

<210> 16

<211> 5198

<212> DNA

<213> Homo sapiens

<400> 16
ctcacttaaa cacgtagttc ccgcgacccc aacgtcccag aggcggggcc ggagtcggcg 60
gtggcgctcc ttggagccgg ctcccgtccc taccctgcaa acagacctca gctccgcgga 120
agttgcgaga cgggggtttca ccatgtttggc cgggctggtc tggaaatcct gacttcaggt 180
gatccacccg cctcggcctc ccaaaatgct gggattacaa gcgtgagcca ccgcccctga 240
catgagccat tgacttttaa agcaggagaa taatttggat cagatttata tggaaacact 300
cttctagcag cattatgggg acttttccat aagtctggat actgaggatt tggaaataaa 360
gaaatcattc accagacatc atggagccta tatatccttt tgcacggccc cagatgaata 420
ccaggtttcc ttcaagcagg atggtacctt tccactttcc tccatcaaaa tgtgcacttt 480
ggaacccaac gccaaactga gatttcatct acttacatct cagttactac agaaatccaa 540
agcttgtggt gactgagaag accatccgac ttgcttatcg tcatgctaac gagaataaaa 600
aaaattcgtc atgcttttta cttggttctc tgacagcaga cgaagatgaa gaagggtgaa 660
cattgacagt agatcgcttt gatcctggc gagaagtacc tgaatgccta gaaataaccc 720
ctactgcttc tcttctctggg gactttttga ttccatgcaa agttcatact caagaacttt 780
gttcaagaga aatgatagtt cacagtgtag atgacttcag ttcagcttta aaggctctac 840
agtgccatat atgtagcaaa gattccttgg actgtggtaa gctgctttcc ctaagagttc 900
atatcacttc caggagagat ttggacagtg tggaaattga cttgcattgg gcagcagtaa 960
ctctagcaaa taacttttaa tgcacacctg tgaagcccat cccattatt ccaacagctc 1020
tggcaagaaa cttgagcagt aatctgaata tttctcaagt tcaagggact tataaatatg 1080
gatatcttac catggatgaa acacgcaaat tggtactttt gttggaatct gatcccaagg 1140
tttattctct accattgggtg ggaatttggc tgtctggaat tacacatata tatagtcctc 1200
aggtatgggc ttgctgtttg cgatacatat tcaattcttc tgttcaagaa agggtttttt 1260
cagaatctgg aaatttcatc atagttctct attctatgac acataaggaa cctgagtttt 1320
atgaatgctt ccttgtgat ggcaagatac ctgactttcg gtttcagttg ctaaccagta 1380
aggaaacatt acatcttttc aaaaatgttg aacctcctga caaaaatcca atccgttgtg 1440
aactgagcgc tgaaagccaa aatgcagaaa cagagttttt cagtaaggct tccaagaatt 1500
tttcaattaa gaggtcttcc caaaagttat cttctgggaa gatgccaaata catgatcacg 1560
actctggtgt tgaagatgaa gatttttctc caagaccaat tcctagtcct catccagtga 1620
gtcagaagat ttctaagatc caaccatcag ttctgaact ttacttgtg ttggatggca 1680
atctcataga atcaaaccct ctgcctactc cattggaaat ggtgaataat gaaaatcctc 1740

ctttgattaa	ccacttggaa	cacttgaagc	cattgcaacc	ccagctttat	gatgagaaac	1800
acagtccaga	agttgaagct	ggagagcctt	ccttgagagg	aataccaaat	cagttaaacc	1860
aggataaacc	agctcttttg	agacactgca	aagtaagaca	gccacctgcc	tataagaaag	1920
ggaacccccca	taccaggaac	agtattaaac	catctttctca	taatgggcca	tctcatgata	1980
tatttgaaaa	gctccaaaca	gtttctgctg	gaaatgtaca	aaacgaagag	tatcctataa	2040
gaccctccac	acttaattct	aggcagtctt	ctcttgcccc	gcagtcccaa	ccacacgatt	2100
ttgttttttc	accccataat	tcaggaagac	caatggaact	tcagatacct	actccccac	2160
tgccatctta	ctgttccaca	aacgtttgca	gggtgtgtca	gcattcatagt	catattcaat	2220
atagtccgct	aaattcttgg	caaggagcaa	acacagttgg	atccattcaa	gatgtccagt	2280
ctgaagccct	tcaaaagcat	tcattatttc	acccaagtgg	atgtccagcc	ctgtactgta	2340
atgcattctg	ttcttcaagt	agtcctatag	ccttgagacc	tcagggagat	atgggcagtt	2400
gttctcccca	cagcaatatt	gaaccatcgc	ctgtggcaag	accgccttca	catatggact	2460
tatgtaaccc	acagccttgc	acagtgtgca	tgcacacacc	caagactgag	tcagataatg	2520
gaatgatggg	actatctcca	gatgcatatc	ggttcctcac	agaacaagac	agacagctaa	2580
gactacttca	ggcacagatt	cagcgtttgt	tggaagcaca	gtctctgatg	ccctgttccc	2640
ctaagacaac	tgctgttgaa	gacacagtgc	aagctggaag	acaaatggag	ttgggtttctg	2700
tggaagcaca	gtcttcccct	ggcttgcaca	tgagaaaagg	tgtaagcatt	gctgtgagca	2760
caggtgctag	cttggttttg	aatgcagcag	gtgaggatca	agagcctgac	tctcaaataga	2820
agcaagatga	tacaaaaatt	tccagtgagg	acatgaatth	ttctgtcgat	attaataatg	2880
aagtcacaag	tcttccaggt	agtgcattct	cattaaaagc	agttgatatt	cccagttttg	2940
aagagagcaa	cattgctgtg	gaagaagaat	ttaaccagcc	actttctgta	tccaactctt	3000
ctctagtgtg	gagaaaagaa	cctgatgtac	ctgtgttctt	tccaagtggc	cagctggcag	3060
aaagtgtgag	catgtgttta	cagactggac	caacaggggg	tgccagtaac	aattctgaaa	3120
catcagagga	acaaaaaatt	gagcatgtaa	tgcaaccctt	gcttcatcaa	ccatcagata	3180
accagaaaat	ttaccaggat	ttattgggtc	aagtaaacca	cctattaaat	agttcctcca	3240
aggaaactga	gcagccgtct	accaaagcag	taattatcag	tcatgaatgc	accagaaccc	3300
aaaacgttta	ccatacaaag	aaaaaaacac	atcattcaag	actggtggac	aaagattgtg	3360
tccttaatgc	aactcttaag	caactaagaa	gccttggagt	aaaaattgat	tctcccacta	3420
aagtgaagaa	aaatgcacat	aacgtggatc	acgccagtgt	gttggcatgc	atcagcccag	3480

aagcagtgat	ctctggatta	aactgcatgt	catttgctaa	tgttggcatg	agcggcttaa	3540
gccccaatgg	tgtggatttg	agcatggagg	caaatgctat	agctctgaaa	tatttaaattg	3600
aaaatcagct	gtcacaactg	tctgtcactc	gatcgaacca	aaataattgt	gacccattca	3660
gcctttctcca	tattaataca	gacagaagca	cagtggggct	tagtttaatt	tcaccaaaca	3720
acatgtcatt	tgcaacaaaa	aaatatatga	agagatatgg	actcctacaa	agcagtgaca	3780
atagtgaaga	tgaagaggaa	cctcccgaca	atgcagatag	caagagtga	tattttattga	3840
atcagaacct	taggtccata	cccgaacagc	ttggtgggtca	gaaagagcct	tctaagaatg	3900
accatgaaat	aattaattgt	tctaactgtg	aatctgtggg	gaccaacgca	gatacgccag	3960
tattgagaaa	tattacaaat	gaagttttgc	agacaaaagc	aaaacagcag	ttgactgaaa	4020
agccagcttt	cttagtaaag	aaccttaaac	caagtcctgc	agtgaacctt	cgaaccggga	4080
aagcagagtt	cactcaacat	cctgagaaa	aaaatgaagg	ggacattaca	atTTTTctctg	4140
aaagtttgca	accttctgaa	acgctaaagc	agatgaatag	catgaattca	gtaggcacct	4200
tcttagatgt	aaaacgtctc	agacagttac	caaaattatt	ttaacctttt	aactccctgc	4260
ccttttaata	cagggacagg	gtgtctcctg	aagatactta	gggaaaacag	gagcctacca	4320
caaggctcct	gatcattctg	gagtcactgt	ttcttggtag	cagccaattg	ggaagagtga	4380
cttctgtgag	atggctggct	ggtgatagga	ctaagttctc	attgttcaaa	tagagctggt	4440
caacatcact	gaaaccttta	agaaaagccc	tgagatcagt	tattcctaca	agtttaagta	4500
gtagacagat	actatccagc	tctaagtctc	aactgctctt	ttatactgta	cttttttttt	4560
tgagacggag	ttttgctctt	gtagcccgag	ctggagtgc	atggcaggat	ctcagatcac	4620
tgcaacctct	gcctcctggg	ttcaagcgat	tttctgctt	catcttccca	ggtagctggg	4680
attacaggca	tgtgccacaa	cgctgggcta	atTTTgtatt	tttagtagag	actggtttct	4740
ccatgttgg	caggctggct	tcaaactccc	gacctcaggt	gatccgccc	cctcggcctc	4800
ctaaagtgct	gggattacag	gcgtgagcca	ctgccagct	atactgtata	tttaagaagg	4860
tccagcatgt	tgcattctctg	cattatccta	tatcataaaa	gaagcataag	ttatcatggt	4920
gttgggtaaa	ttagcgaaat	caaccgcttc	ctaagtttaa	gggaaaagtt	atTTTTaaaa	4980
acaacttaat	aaaaacttac	actcttatac	aagagtgtat	ttccccctaa	ttaggatgca	5040
tgttgattaa	actcgagata	cagctTTTTg	cagtatgggtg	ggttggTTTT	ggtgtaacat	5100
cttcaacatg	tcacactggc	tatcaaagaa	taagaaaatt	attgagtatg	agtggtgttt	5160
ataaactttc	tgagtTTTTc	agatgtctta	atattttt			5198

<210> 17
 <211> 691
 <212> DNA
 <213> Homo sapiens

<400> 17
 gacccctcac actcacctag ccaccatgga catcgccatc caccacccct ggatccgccc 60
 ccccttcttt cctttccact cccccagccg cctctttgac cagttcttcg gagagcacct 120
 gttggagtct gatcttttcc cgacgtctac ttccctgagt cccttctacc ttcgccacc 180
 ctcttctctg cgggcaccca gctggtttga cactggactc tcagagatgc gcctggagaa 240
 ggacagggttc tctgtcaacc tggatgtgaa gcacttctcc ccagaggaac tcaaagttaa 300
 ggtgttgagg gatgtgattg aggtgcatgg aaaacatgaa gagcgccagg atgaacatgg 360
 tttcatctcc agggagttcc acaggaaata ccggatccca gctgatgtag accctctcac 420
 cattacttca tccctgtcat ctgatggggc cctcactgtg aatggaccaa ggaaacaggt 480
 ctctggccct gagcgacca ttcccatcac ccgtgaagag aagcctgctg tcaccgcagc 540
 cccaagaaa tagatgccct ttcttgaatt gcatttttta aaacaagaaa gtttccccac 600
 cagtgaatga aagtcttgct actagtgtg aagcttatta atgctaaggg caggcccaaa 660
 ttatcaagct aataaaatat cattcagcaa c 691

<210> 18
 <211> 2053
 <212> DNA
 <213> Homo sapiens

<400> 18
 ccggctcgcg ccctccgggc ccagcctccc gagccttcgg agcgggcgcc gtcccagccc 60
 agctccgggg aaacgcgagc cgcgatgcct ggggggtgct cccggggccc cgccgcggg 120
 gacgggcgctc tgcggctggc gcgactagcg ctggtactcc tgggctgggt ctctcgtct 180
 tctccacact cctcggcatc ctcttctctc tctcgggcgc cgttcctggc ttccgcgctg 240
 tccgcccagc ccccgctgcc ggaccagtgc ccgcgctgt gcgagtgtc cgaggcagcg 300
 cgcacagtca agtgcggttaa ccgcaatctg accgaggtgc ccacggacct gccgcctac 360
 gtgcgcaacc tcttccttac cggcaaccag ctggccgtgc tccctgccgg cgccttcgcc 420
 cgccggccgc cgctggcgga gctggccgcg ctcaacctca gcggcagccg cctggacgag 480
 gtgcgcgcgg gcgccttcga gcactgtccc agcctgcgcc agctcgacct cagccacaac 540
 ccaactggccg acctcagtcc ctctcgtttc tcgggcagca atgccagcgt ctcgccccc 600

```

agtcccccttg tggaactgat cctgaaccac atcgtgcccc ctgaagatga gcggcagaac 660
cggagcttcg agggcatggg ggtggcgggc ctgctggcgg gccgtgcact gcaggggctc 720
cgccgcttgg agctggccag caaccacttc ctttacctgc cgcgggatgt gctggcccaa 780
ctgcccagcc tcaggcacct ggacttaagt aataattcgc tggtagacct gacctacgtg 840
tccttccgca acctgacaca tctagaaagc ctccacctgg aggacaatgc cctcaaggtc 900
cttcacaatg gcaccctggc tgagttgcaa ggtctacccc acattagggg tttcctggac 960
aacaatccct gggctctgca ctgccacatg gcagacatgg tgacctggct caaggaaaca 1020
gaggtagtgc agggcaaaga cgggctcacc tgtgcatatc cggaaaaaat gaggaatcgg 1080
gtcctcttgg aactcaacag tgctgacctg gactgtgacc cgattcttcc cccatccctg 1140
caaacctctt atgtcttctt ggggtattgt ttagccctga taggcgctat tttcctcctg 1200
gttttgtatt tgaaccgcaa ggggataaaa aagtggatgc ataacatcag agatgcctgc 1260
agggatcaca tggaagggtg tcattacaga tatgaaatca atgcggaccc cagattaaca 1320
aacctcagtt ctaactcgga tgtctgagaa atattagagg acagaccaag gacaactctg 1380
catgagatgt agacttaagc tttatcccta ctaggcttgc tccactttca tcctccacta 1440
tagatacaac ggactttgac taaaagcagt gaaggggatt tgcttcttgg ttatgtaaag 1500
tttctcggtg tgttctgtta atgtaagacg atgaacagtt gtgtatagtg ttttaccctc 1560
ttctttttct tggaactcct caacacgtat ggagggattt ttcagggttc agcatgaaca 1620
tgggcttctt gctgtctgtc tctctctcag tacagttcaa ggtgtagcaa gtgtaccac 1680
acagatagca ttcaacaaaa gctgcctcaa ctttttcgag aaaaataactt tattcataaa 1740
tatcagtttt attctcatgt acctaagttg tggagaaaat aattgcatcc tataaactgc 1800
ctgcagacgt tagcaggctc ttcaaaataa ctccatgggtg cacaggagca cctgcatcca 1860
agagcatgct tacatcttac tgttctgcat attacaaaaa ataacttgca acttcataac 1920
ttctttgaca aagtaaatta cttttttgat tgcagtttat atgaaaatgt actgattttt 1980
ttttaataaa ctgcatcgag atccaaccga ctgaattgtt aaaaaaaaaa aaaaataaag 2040
attcttaaaa gaa 2053

```

<210> 19

<211> 1023

<212> DNA

<213> Homo sapiens

<400> 19
tcttgaagcc agagcagcgc caggatgtca cgggagctgg cccactgct gcttctcctc 60
ctctccatcc acagcgccct ggccatgagg atctgctcct tcaacgtcag gtcccttggg 120
gaaagcaagc aggaagacaa gaatgccatg gatgtcattg tgaaggcat caaacgctgt 180
gacatcatatc tcgtgatgga aatcaaggac agcaacaaca ggatctgccc catactgatg 240
gagaagctga acagaaattc aaggagaggc ataacgtaca actatgtgat tagctctcgg 300
cttgggaagaa acacatatataa agaacaatat gcctttctct acaaggaaaa gctgggtgtct 360
gtgaagagga gttatcacta ccatgactat caggatggag acgcagatgt gttttccagg 420
gagccctttg tgggtctggtt ccaatctccc cacactgctg tcaaagactt cgtgattatc 480
ccctgcaca ccaccccaga gacatccgtt aaggagatcg atgagttggt tgaggtctac 540
acggacgtga aacaccgctg gaaggcggag aatttcattt tcatgggtga cttcaatgcc 600
ggctgcagct acgtcccca gaaggcctgg aagaacatcc gcttgaggac tgaccccagg 660
tttgtttggc tgatcgggga ccaagaggac accacggtga agaagagcac caactgtgca 720
tatgacagga ttgtgcttag aggacaagaa atcgtcagtt ctgttggtcc caagtcaaac 780
agtgtttttg acttccagaa agcttacaag ctgactgaag aggaggccct ggatgtcagc 840
gaccactttc cagttgaatt taaactacag tcttcaaggg ccttcaccaa cagcaaaaaa 900
tctgtcactc taaggaagaa aacaaagagc aaacgctcct agaccaagg gtctcatctt 960
attaaccatt tcttgccctc aaataaaatg tctctaacag aaaaaaaaaa aaaaaaaaaa 1020
aaa 1023

<210> 20
<211> 2912
<212> DNA
<213> Homo sapiens

<400> 20
cagttgcttc agcgtcccg tgtggctgtg ccgttggtcc tgtgcggtca cttagccaag 60
atgcctgagg aaaccagac ccaagaccaa ccgatggagg aggaggagggt tgagacgttc 120
gcctttcagg cagaaattgc ccagttgatg tcattgatca tcaatacttt ctactcgaac 180
aaagagatct ttctgagaga gctcatttca aattcatcag atgcattgga caaaatccgg 240
tatgaaactt tgacagatcc cagtaaatta gactctggga aagagctgca tattaacctt 300
ataccgaaca aacaagatcg aactctcact attgtggata ctggaattgg aatgaccaag 360
gctgacttga tcaataacct tgggtactatc gccaaagtct ggaccaaaagc gttcatggaa 420

gctttgcagg	ctggtgcaga	tatctctatg	attggccagt	tcggtggtgg	tttttattct	480
gcttatttgg	ttgctgagaa	agtaactgtg	atcaccaaac	ataacgatga	tgagcagtac	540
gcttgaggag	cctcagcagg	gggatcattc	acagtgagga	cagacacagg	tgaacctatg	600
ggtcgtggaa	caaaagttat	cctacacctg	aaagaagacc	aaactgagta	cttgaggagg	660
cgaagaataa	aggagattgt	gaagaaacat	tctcagttta	ttggatatcc	cattactctt	720
tttgtggaga	aggaacgtga	taaagaagta	agcgatgatg	aggctgaaga	aaaggaagac	780
aaagaagaag	aaaaagaaaa	agaagagaaa	gagtcggaag	acaaacctga	aattgaagat	840
gttggttctg	atgaggaaga	agaaaagaag	gatggtgaca	agaagaagaa	gaagaagatt	900
aaggaaaagt	acatcgatca	agaagagctc	aacaaaacaa	agcccatctg	gaccagaaat	960
cccgcagata	ttactaatga	ggagtacgga	gaattctata	agagcttgac	caatgactgg	1020
gaagatcact	tggcagtga	gcatttttca	gttgaaggac	agttggaatt	cagagccctt	1080
ctatttgtcc	cacgacgtgc	tccttttgat	ctgtttgaaa	acagaaagaa	aaagaacaat	1140
atcaaattgt	atgtacgcag	agttttcatc	atggataact	gtgaggagct	aatccctgaa	1200
tatctgaact	tcattagagg	ggtggtagac	tcggaggatc	tcctctctaa	catatcccgt	1260
gagatgttgc	aacaaagcaa	aattttgaaa	gttatcagga	agaatttggg	caaaaaatgc	1320
ttagaactct	ttactgaact	ggcggaagat	aaagagaact	acaagaaatt	ctatgagcag	1380
ttctctaaaa	acataaagct	tggaatacac	gaagactctc	aaaatcggaa	gaagctttca	1440
gagctgttaa	ggtactacac	atctgcctct	ggtgatgaga	tggtttctct	caaggactac	1500
tgcaccagaa	tgaaggagaa	ccagaaacat	atctattata	tcacagggtg	gaccaaggac	1560
caggtagcta	actcagcctt	tgtggaacgt	cttcggaaac	atggcttaga	agtgatctat	1620
atgattgagc	ccattgatga	gtactgtgtc	caacagctga	aggaatttga	ggggaagact	1680
ttagtgtcag	tcaccaaaga	aggcctggaa	cttcagagg	atgaagaaga	gaaaaagaag	1740
caggaagaga	aaaaaacaaa	gtttgagaac	ctctgcaaaa	tcatgaaaga	catattggag	1800
aaaaaagttg	aaaagggtgg	tgtgtcaaac	cgattggtga	catctccatg	ctgtattgtc	1860
acaagcacat	atggctggac	agcaaacatg	gagagaatca	tgaaagctca	agccctaaga	1920
gacaactcaa	caatgggtta	catggcagca	aagaaacacc	tggagataaa	ccctgaccat	1980
tccattattg	agaccttaag	gcaaaaggca	gaggctgata	agaacgacaa	gtctgtgaag	2040
gatctggtca	tcttgcttta	tgaaactgcg	ctcctgtctt	ctggcttcag	tctggaagat	2100
ccccagacac	atgctaacag	gatctacagg	atgatcaaac	ttggtctggg	tattgatgaa	2160

gatgacccta	ctgctgatga	taccagtgtc	gctgtaactg	aagaaatgcc	acccttgaa	2220
ggagatgacg	acacatcacg	catggaagaa	gtagactaat	ctctggctga	gggatgactt	2280
acctgttcag	tactctacaa	ttcctctgat	aatatatatt	caaggatgtt	tttctttatt	2340
tttgtttaata	ttaaaaagtc	tgtatggcat	gacaactact	ttaaggggaa	gataagattt	2400
ctgtctacta	agtgatgctg	tgatacctta	ggcactaaag	cagagctagt	aatgcttttt	2460
gagtttcatg	ttggttcttt	cacagatggg	gtaacgtgca	ctgtaagacg	tatgtaacat	2520
gatgttaact	ttgtgtggtc	taaagtgttt	agctgtcaag	ccggatgcct	aagtagacca	2580
aatcttgtta	ttgaagtgtt	ctgagctgta	tcttgatgtt	tagaaaagta	ttcgttacat	2640
cttgtaggat	ctactttttg	aacttttcat	tccctgtagt	tgacaattct	gcatgtacta	2700
gtcctctaga	aatagggtta	actgaagcaa	cttgatggaa	ggatctctcc	acagggcttg	2760
ttttccaaag	aaaagtattg	tttggaggag	caaagttaaa	agcctaccta	agcatatcgt	2820
aaagctgttc	aaatactcga	gcccagtcct	gtggatggaa	atgtagtgct	cgagtcacat	2880
tctgcttaaa	gttgaacaa	atacagatga	gt			2912

<210> 21

<211> 2648

<212> DNA

<213> Homo sapiens

<400> 21

gtgacagaag	ctgtgggagg	agctggaggg	ttcacctggg	taatcacagc	gccgctgctg	60
ccccgccttg	caggtctcag	gactgtcatc	gcctctgggt	gtgaggggtac	tttgccacc	120
gtccccggaa	ataaccgcgc	ctgcctctca	agatacccca	tcctctccac	gccgctgccg	180
ctgccgccat	gcaaggggag	gacgccagat	acctcaaaag	gaaagttaaa	ggaggggaata	240
tagatgtaca	tccatcagaa	aaagcactca	ttgttcacta	tgaagtggaa	gctaccattc	300
ttggagaaat	gggggacccc	atgttgggag	aacgaaaaga	atgtcaaaaa	atcattcgac	360
ttaagagtct	caatgccaac	acagatataa	cttcctgggc	aaggaagggtg	gttgaagaat	420
gtaaactcat	tcctccttca	aaactaaatg	aggtagaact	gctgttgtac	tatctacaga	480
accgccgtga	ttcattgtca	ggaaaagaga	aaaaagaaaa	atcaagcaag	cctaaagatc	540
cacctccttt	tgaaggaatg	gagattgatg	aagttgctaa	cattaatgac	atggatgaat	600
atattgagtt	attatatgaa	gatattcctg	acaaagttcg	gggttctgct	ttgatcctgc	660
agcttgctcg	aaatcctgat	aacttggaag	aactactatt	gaatgaaact	gcccttggtg	720
cattagcaag	ggccttgaga	gaagactgga	agcaaagtgt	cgagttagct	acaaacataa	780

tttacatctt	tttttgtttc	tccagctttt	ctcaatttca	tggacttatt	actcactata	840
aaattggagc	tctgtgtatg	aatattattg	atcatgagtt	aaaaagacat	gagctttggc	900
aagaagaact	ctcaaagaag	aagaaagctg	ttgatgaaga	ccctgaaaac	caaaccttga	960
gaaaggatta	tgaaaaaacc	tttaaaaagt	accaggggct	tgtggtaaaa	caggaacagc	1020
tattacgagt	tgctctttat	ttgcttctga	atcttgctga	ggatactcgt	accgaactga	1080
aaatgaggaa	caagaacata	gttcacatgt	tggtgaaagc	ccttgatcgg	gacaattttg	1140
agctgcta	tttagttgtg	tcattcttga	agaaactcag	cattttttatg	gagaataaaa	1200
atgatatgg	ggaaatggat	attgttgaaa	aactggtgaa	aatgatacct	tgtgagcatg	1260
aagacctgct	gaatatcacc	ctccgacttt	tactaaacct	atcctttgac	acaggactga	1320
ggaataagat	ggtacaagtt	ggactgcttc	ccaagctcac	tgactccta	ggcaatgaca	1380
actacaaaca	aatagcaatg	tgtgttcttt	accacataag	catggatgac	cgctttaaat	1440
caatgtttgc	atacactgac	tgtataccac	agttaatgaa	gatgctgttt	gaatgttcag	1500
atgaacgaat	tgacttggaa	ctcatttctt	tctgcattaa	tcttgctgct	aacaaaagaa	1560
atgtacagct	tatctgtgaa	ggaaatgggc	tgaagatgct	catgaagagg	gctctgaagt	1620
ttaaggatcc	attgctgatg	aaaatgatta	gaaacatttc	tcagcatgat	ggaccaacta	1680
aaaatctggt	tattgattat	gttggggacc	ttgcagccca	gatctcta	gatgaagaag	1740
aggagtctgt	gattgaatgt	ttgggaactc	ttgcaaaactt	gaccattcca	gacttagact	1800
gggaattgg	tcttaaagaa	tataagttgg	ttccatacct	caaggataaa	ctaaaaccag	1860
gtgctgcaga	agatgatctt	gttttagaag	tgggtataat	gattggaact	gtatccatgg	1920
atgactcttg	tgctgcattg	ctagccaaat	ctggcataat	ccctgcactc	attgaattgc	1980
taaatgctca	acaagaagat	gatgaatttg	tgtgtcagat	aatttatgtc	ttctaccaga	2040
tggttttcca	ccaagccaca	agagacgtca	taatcaagga	aacacaggct	ccagcatatc	2100
tcatagacct	aatgcatgat	aagaataatg	aaatccgaaa	ggtctgtgat	aatacattag	2160
atattatagc	ggaatatgat	gaagaatggg	ctaagaaaat	tcagagtga	aagtttcgct	2220
ggcataactc	tcagtggctg	gagatggtag	agagtcgtca	gatggatgag	agtgagcagt	2280
acttgatgg	tgatgatcga	attgagccat	acattcatga	aggagatatt	ctcgaaagac	2340
ctgacctttt	ctacaactca	gatggattaa	ttgcctctga	aggagccata	agtcccgatt	2400
tcttcaatga	ttaccacctt	caaaatggag	atgttggtgg	gcagcattca	tttcctggca	2460
gccttggaat	ggatggcttt	ggccaaccag	ttggcattct	tggacgcctt	gccacagcat	2520

```

atggattccg ccctgatgaa ccttactact atggctatgg atcttgataa agtatctggt 2580
tccatgtgta atctcagctt agaagaaatc tgtgtgggtt gggtaattt tggatctttg 2640
cctaataa 2648

```

```

<210> 22
<211> 494
<212> DNA
<213> Homo sapiens

```

```

<400> 22
tttttttttt tttccaatgc aatggcttca aggttacttc gcggagctgg aacgctggcc 60
gcgcaggccc tgagggtctg cggccccagt ggcgcggccg cgatgcgctc catggcatct 120
ggaggtggtg ttcccactga tgaagagcag gcgactgggt tggagaggga gatcatgctg 180
gctgcaaaga agggactgga cccatacaat gtactggccc caaaggagc ttcaggcacc 240
agggaagacc ctaatttagt cccctccatc tccaacaaga gaatagtagg ctgcatctgt 300
gaagaggaca ataccagcgt cgtctggttt tggtgcaca aagggcaggc ccagcgatgc 360
ccccgctgtg gagccatta caagctggtg cccagcagc tggcacactg agcacctgca 420
ctaaattact caaaatgtgc tgtaaagttt cttctttcca gtaaagacta gccattgcat 480
tggtccttc tccc 494

```

```

<210> 23
<211> 4364
<212> DNA
<213> Homo sapiens

```

```

<400> 23
cattagatct ttacatgaaa gtaaaattta taagatttct agaaagtcaa aagatgataa 60
ctatttctta ggatactaaa agcactcaca ttatagaaaa aaaatcagtt aactatactc 120
cacaaacatt aaaggctccc tataaaaaaa catttttaat aggcaagcca cagaaagggc 180
aaatattaat agtttgcaat acatatgtat gaaaaggaat tgaatctaga atatttaaca 240
aagctttaca actcaaaaaa tacaagaaa atatttttct tccaattggc aaattactta 300
aacagaacct tcacaaaaga agataagaat gtttaataaa catttgaagc cataataatg 360
acatcattag ccatgatgga aatgcaaatt taagtaccac ttcacatcca caagaaaaag 420
ataaaaaataa aaggactgag ctcaccaaac attggtgagg atgtggtaat actgaaattc 480
ttgtaccgtg ctccctgagg tataacatat tacaggattt ttttgaaaac tagtggttcc 540
ttataaactt aatgccttg caacctcaca cctatttact taagaatgaa agggccccgc 600

```

cctcctccct	cctcgctcgc	gggccggggcc	cggcatgggtg	cggcgtcgcc	gccgatggcg	660
ctgaggcgga	gcatggggcg	gccggggctc	ccgccgctgc	cgctgccgcc	gccaccgcgg	720
ctcgggctgc	tgctggcgga	gtccgccgcc	gcaggctctga	agctcatggg	agccccggtg	780
aagctgacag	tgtctcaggg	gcagccgggtg	aagctcaact	gcagtgtgga	ggggatggag	840
gagcctgaca	tccagtgggt	gaaggatggg	gctgtgggtcc	agaacttga	ccagttgtac	900
atcccagtc	gcgagcagca	ctggatcggc	ttcctcagcc	tgaagtcagt	ggagcgctct	960
gacgccggcc	ggtactgggtg	ccagggtggag	gatgggggtg	aaaccgagat	ctcccagcca	1020
gtgtggctca	cggtagaagg	tgtgccattt	ttcacagtgg	agccaaaaga	tctggcagtg	1080
ccaccaatg	cccctttcca	actgtcttgt	gaggctgtgg	gtccccctga	acctgttacc	1140
attgtctggt	ggagaggaac	tacgaagatc	gggggacccg	ctccctctcc	atctgtttta	1200
aatgtaacag	gggtgaccca	gagcaccatg	ttttcctgtg	aagctcacia	cctaaaaggc	1260
ctggcctctt	ctcgcacagc	cactgttcac	cttcaagcac	tgctgcagc	ccccttcaac	1320
atcacctga	caaagctttc	cagcagcaac	gctagtgtgg	cctggatgcc	aggtgctgat	1380
ggccgagctc	tgctacagtc	ctgtacagtt	cagggtgacac	aggccccagg	aggctgggaa	1440
gtcctggctg	ttgtgggtccc	tgtgcccccc	tttacctgcc	tgctccggga	cctgggtgcct	1500
gccaccaact	acagcctcag	ggtgcgctgt	gccaatgcct	tggggccctc	tccctatgct	1560
gactgggtgc	cctttcagac	caaggggtcta	gccccagcca	gcgctcccca	aaacctccat	1620
gccatccgca	cagattcagg	cctcatcttg	gagtgggaag	aagtgatccc	cgaggcccct	1680
ttggaaggcc	ccctgggacc	ctacaaactg	tcttgggttc	aagacaatgg	aaccaggat	1740
gagctgacag	tggaggggac	cagggccaat	ttgacaggct	gggatcccca	aaaggacctg	1800
atcgtagctg	tgtgcgtctc	caatgcagtt	ggctgtggac	cctggagtca	gccactgggtg	1860
gtctcttctc	atgaccgtgc	aggccagcag	ggccctcctc	acagccgcac	atcctgggta	1920
cctgtgggtcc	ttgggtgtgct	aacggccctg	gtgacggctg	ctgccctggc	cctcatcctg	1980
cttcgaaaga	gacggaaaga	gacgcgggtt	gggcaagcct	ttgacagtgt	catggcccgg	2040
ggagagccag	ccgttcactt	ccgggcagcc	cggtccttca	atcgagaaag	gcccagagcg	2100
atcgaggcca	cattggacag	cttgggcatc	agcgatgaac	taaaggaaaa	actggaggat	2160
gtgctcatcc	cagagcagca	gttcaccctg	ggccggatgt	tgggcaaagg	agagtttggt	2220
tcagtgcggg	aggcccagct	gaagcaagag	gatggctcct	ttgtgaaagt	ggctgtgaag	2280
atgctgaaag	ctgacatcat	tgccctcaagc	gacattgaag	agttcctcag	ggaagcagct	2340

tgcatgaagg agtttgacca tccacacgtg gccaaacttg ttggggtaag cctccggagc	2400
agggctaaag gccgtctccc catcccatg gtcattctgc ccttcatgaa gcatggggac	2460
ctgcatgcct tcctgctcgc ctcccggatt ggggagaacc cctttaacct acccctccag	2520
accctgatcc gggtcatggg ggacattgcc tgcggcatgg agtacctgag ctctcggaac	2580
ttcatccacc gagacctggc tgctcggaat tgcatgctgg cagaggacat gacagtgtgt	2640
gtggctgact tcggactctc ccggaagatc tacagtgggg actactatcg tcaaggctgt	2700
gcctccaaac tgctgtcaa gtggctggcc ctggagagcc tggccgacaa cctgtatact	2760
gtgcagagtg acgtgtgggc gttcgggggtg accatgtggg agatcatgac acgtgggcag	2820
acgccatatg ctggcatcga aaacgtgag atttacaact acctcattgg cgggaaccgc	2880
ctgaaacagc ctccggagtg tatggaggac gtgtatgac tcatgtacca gtgctggagt	2940
gctgacccca agcagcgccc gagctttact tgtctgcgaa tggaactgga gaacatcttg	3000
ggccagctgt ctgtgctatc tgccagccag gacccttat acatcaacat cgagagagct	3060
gaggagccca ctgtgggagg cagcctggag ctacctggca gggatcagcc ctacagtggg	3120
gctggggatg gcagtggcat gggggcagtg ggtggcactc ccagtgactg tcggtacata	3180
ctcacccccg gagggctggc tgagcagcca gggcaggcag agcaccagcc agagagtccc	3240
ctcaatgaga cacagaggct tttgctgctg cagcaagggc tactgccaca cagtagctgt	3300
tagccacag gcagagggca tcggggccat ttggccggct ctggtggcca ctgagctggc	3360
tgactaagcc ccgtctgacc ccagcccaga cagcaagggtg tggaggctcc tgtggtagtc	3420
ctcccaagct gtgctgggaa gcccgactg accaaatcac ccaatcccag ttcttcctgc	3480
aaccactctg tggccagcct ggcatcagtt taggccttg cttgatggaa gtgggccagt	3540
cctggttgtc tgaaccagg cagctggcag gagtgggggtg gttatgtttc catggttacc	3600
atgggtgtgg atggcagtgt ggggagggca ggtccagctc tgtgggccct accctcctgc	3660
tgagctgccc ctgctgctta agtgcatgca ttgagctgcc tccagcctgg tggcccagct	3720
attaccacac ttgggggttta aatatccagg tgtgccctc caagtcagaa agagatgtcc	3780
ttgtaatat cccttttagg tgagggttg taaggggttg gtatctcagg tctgaatctt	3840
caccatcttt ctgattccgc accctgccta cgccaggaga agttgagggg agcatgcttc	3900
cctgcagctg accgggtcac acaaaggcat gctggagtac ccagcctatc aggtgccct	3960
cttccaaagg cagcgtgccg agccagcaag aggaaggggt gctgtgaggc ttgccagga	4020
gcaagtgagg ccggagagga gttcaggaac cttctccat acccacaatc tgagcacgct	4080

accaaattctc	aaaatatcct	aagactaaca	aaggcagctg	tgtctgagcc	caacccttct	4140
aaacggtgac	ctttagtgcc	aacttcccct	ctaactggac	agcctcttct	gtcccaagtc	4200
tccagagaga	aatcaggcct	gatgaggggg	aattcctgga	acctggaccc	cagccttggt	4260
gggggagcct	ctggaatgca	tggggcgggt	cctagctggt	agggacattt	ccaagctggt	4320
agttgctggt	taaaatagaa	ataaaattga	agactaaaga	ccta		4364

<210> 24

<211> 14756

<212> DNA

<213> Homo sapiens

<400> 24

ctgggcgggc	gggcgcgggg	agagggcgcg	ggagcgggctc	gtgcggcagg	taccatgcgg	60
acgcgcgagc	ccggcgaggc	cccggcaggc	ccgtccctgc	tcgggggcg	gctgagacgg	120
cgggtgagct	ccacgagagc	gccgtcgcca	cttcggggcca	actttgcgat	tcccgcacagt	180
taagcaatgg	ggagacattt	ggctttgctc	ctgcttctgc	tccttctctt	ccaacatttt	240
ggagacagt	atggcagcca	acgacttgaa	cagactcctc	tgcagtttac	acacctcgag	300
tacaacgtca	ccgtgcagga	gaactctgca	gctaagactt	atgtggggca	tcctgtcaag	360
atgggtgttt	acattacaca	tccagcgtgg	gaagtaaggt	acaaaattgt	ttccggagac	420
agtgaaaacc	tgttcaaagc	tgaagagtac	attctcggag	acttttgctt	tctaagaata	480
aggaccaaag	gaggaaatac	agctattctt	aatagagaag	tgaaggatca	ctacacattg	540
atagtgaag	cacttgaaaa	aaataactaat	gtggaggcg	gaacaaagg	cagggtgcag	600
gtgctggata	caaatagactt	gagaccgtta	ttctcaccca	cctcatagag	cgtttcttta	660
cctgaaaaca	cagctataag	gaccagtatc	gcaagagtca	gcgccacgga	tgcagacata	720
ggaaccaacg	gggaatttta	ctacagtttt	aaagatcgaa	cagatatggt	tgctattcac	780
ccaaccagt	gtgtgatagt	gttaactgg	agacttgatt	acctagagac	caagctctat	840
gagatggaaa	tcctcgctgc	ggaccgtgg	atgaagttgt	atgggagcag	tggcatcagc	900
agcatggcca	agctaacgg	gcacatcgaa	caggccaatg	aatgtgctcc	ggtgataaca	960
gcagtgcac	tgtcaccatc	agaactggac	agggaaccag	catatgcaat	tgtgacagt	1020
gatgactgc	atcaggggtc	caatgggtg	atagcatctt	taagcatcgt	ggcaggtgac	1080
cttctccagc	agtttagaac	agtgaggtcc	tttccaggga	gtaaggagta	taaagtcaaa	1140
gccatcgggt	acattgattg	ggacagtc	cctttcgggt	acaatctcac	actacaggct	1200

aaagataaag	gaactccgcc	ccagttctct	tctgttaaag	tcattcacgt	gacttctcca	1260
cagttcaaag	ccgggccaagt	caagtttgaa	aaggatgttt	acagagcaga	aataagtga	1320
tttgctcctc	ccaacacacc	tgtgggtcatg	gtaaaggcca	ttcctgctta	ttcccatttg	1380
aggtatgttt	ttaaaaggac	acctggaaaa	gctaaattca	gtttaaatta	caacactggg	1440
ctcatttcta	ttttagaacc	agttaaaaga	cagcaggcag	cccattttga	acttgaagta	1500
acaacaagt	acagaaaagc	gtccaccaag	gtcttggtga	aagtcttagg	tgcaaatagc	1560
aatccccctg	aattttacca	gacagcgta	aaagctgctt	ttgatgagaa	cgtgcccatt	1620
gggtactacta	tcatgagcct	gagtgcgta	gaccctgatg	agggtgagaa	tgggtacgtg	1680
acatacagta	tcgcaaattt	aaatcatgtg	ccgtttgcga	ttgaccattt	cactggtgcc	1740
gtgagtacgt	cagaaaacct	ggactacgaa	ctgatgcctc	gggtttatac	tctgaggatt	1800
cgtgcatcag	actggggctt	gccgtaccgc	cggaagtcg	aagtccttgc	tacaattact	1860
ctcaataact	tgaatgacaa	cacacctttg	tttgagaaaa	taaattgtga	agggacaatt	1920
cccagagatc	taggcgtggg	agagcaaata	accactgttt	ctgctattga	tgcatagaa	1980
cttcagttgg	tacagtatca	gattgaagct	ggaaatgaac	tggatttgtt	tagtttaaac	2040
cccaactcgg	gggtattgtc	attaaagcga	tcgctaattg	atggcttagg	tgcaaagggtg	2100
tctttccaca	gtctgagaat	cacagctaca	gatggagaaa	attttgccac	accattatat	2160
atcaacataa	cagtggctgc	cagtcacaag	ctggtaaact	tgcatgtga	agagactggg	2220
gttgccaaaa	tgctggcaga	gaagctcctg	caggcaaata	aattacacaa	ccaggagag	2280
gtggaggata	ttttcttcga	ttctcaactc	gtcaatgctc	acataccgca	gtttagaagc	2340
actcttccga	ctggatttca	ggtaaaggaa	aaccagcctg	tgggttccag	tgtaattttc	2400
atgaactcca	ctgaccttga	cactggcttc	aatggaaaac	tggcttatgc	tgtttctgga	2460
ggaaatgagg	atagttgctt	catgattgat	atggaaacag	gaatgctgaa	aattttatct	2520
cctcttgacc	gtgaaacaac	agacaaatac	accctgaata	ttaccgtcta	tgacctggg	2580
ataccccaga	aggctgcgtg	gcgtcttcta	catgtcgtgg	ttgtcgatgc	caatgataat	2640
ccacccgagt	ttttacagga	gagctatttt	gtggaagtga	gtgaagacaa	ggaggtacat	2700
agtgaaatca	tccaggttga	agccacagat	aaagacctgg	ggccaacgg	acacgtgacg	2760
tactcaattc	ttacagacac	agacacattt	tcaattgaca	gcgtgacggg	tgttgttaac	2820
atcgcacgcc	ctctggatcg	agagctgcag	catgagcact	ccttaaagat	tgaggccagg	2880
gaccaagcca	gagaagagcc	tcagctgttc	tccactgtcg	ttgtgaaagt	atcactagaa	2940

gatgttaatg	acaaccacc	tacatttatt	ccacctaatt	atcgtgtgaa	agtccgagag	3000
gatcttccag	aaggaaccgt	catcatgtgg	ttagaagccc	acgatcctga	tttaggtcag	3060
tctggtcagg	tgagatacag	ccttctggac	cacggagaag	gaaacttcga	tgtggataaa	3120
ctcagtggag	cagttaggat	cgtccagcag	ttggactttg	agaagaagca	agtgtataat	3180
ctcactgtga	gggccaaaga	caagggaaaag	ccagtttctc	tgtcttctac	ttgctatggt	3240
gaagttgagg	tggttgatgt	gaatgagaac	ctgcaccac	ccgtgttttc	cagctttgtg	3300
gaaaagggga	cagtgaagaa	agatgcacct	gttggttcat	tggtaatgac	gggtgcggct	3360
catgatgagg	acgccggaag	agatggggag	atccgatact	ccattagaga	tggctctggc	3420
gttgggtgtt	tcaaaatagg	tgaagagaca	gggtgtcatag	agacgtcaga	tcgactggac	3480
cgtgaatcga	cctcccatta	ttggctaaca	gtctttgcaa	ccgatcaggg	tgtcgtgcct	3540
ctttcatcgt	tcatagagat	ctacatagag	gttgaggatg	tcaatgacaa	tgcaccacag	3600
acatcagagc	ctgtttatta	cccagaaatc	atggaaaatt	ctcctaaaga	tgtatctgtg	3660
gtccagatcg	aggcatttga	tccagattcg	agctctaatt	acaagctcat	gtacaaaatt	3720
acaagtggaa	atccacaagg	attcttttca	atacatccta	aaacaggtct	catcacaact	3780
acgtcaagga	agctagaccg	agaacagcaa	gatgaacaca	tattagaggt	tactgtgaca	3840
gacaatggta	gtccccccaa	atcaaccatt	gcaagagtca	ttgtgaaaat	ccttgatgaa	3900
aatgacaaca	aacctcagtt	tctgcaaaag	ttctacaaaa	tcagactccc	tgagcgggaa	3960
aagccagacc	gagaaagaaa	tgccagacgg	gagccgctct	atcgcgtcat	agccaccgac	4020
aaggatgagg	gccccaatgc	agaaatctcc	tacagcatcg	aagacgggaa	tgagcatggc	4080
aaatttttca	tcgaaccgaa	aactggagtg	gtttcgtcca	agaggttttc	agcagctgga	4140
gaatatgata	ttctttcaat	taaggcagtt	gacaatggtc	gccctcaaaa	gtcatcaacc	4200
accagactcc	atattgaatg	gatctccaag	cccaaacagt	ccctggagcc	catttcattt	4260
gaagaatcat	tttttacctt	tactgtgatg	gaaagtgacc	ccgttgctca	catgattgga	4320
gtaatatctg	tggagcctcc	tggcataccc	ctttggtttg	acatcactgg	tggcaactac	4380
gacagtcact	tcgatgtgga	caagggaaact	ggaaccatca	ttgttgccaa	acctcttgat	4440
gcagaacaga	agtcaaacta	caacctcaca	gtcgaggcta	cagatggaac	caccactatc	4500
ctcactcagg	tattcatcaa	agtaatagac	acaaatgacc	atcgtcctca	gttttctaca	4560
tcaaagtatg	aagttgttat	tcctgaagat	acagcgccag	aaacagaaat	tttgcaaatc	4620
agtgtgtggg	atcaggatga	gaaaaacaaa	ctaattctaca	ctctgcagag	cagtagagat	4680

ccactgagtc	tcaagaaatt	tcgtcttgat	cctgcaaccg	gctctctcta	tacttctgag	4740
aaactggatc	atgaagctgt	ttcaccagca	cacctcacgg	tcattggtacg	agatcaagat	4800
gtgcctgtaa	aacgcaactt	tgcaaggatt	gtgggtcaatg	tcagcgacac	gaatgaccac	4860
gccccgtggt	tcaccgcttc	ctcctacaaa	ggcggggttt	atgaatcggc	agccgttggc	4920
tcagtttgtt	tgtaggtgac	ggctctggac	aaggacaaag	ggaaaaatgc	tgaagtgtgt	4980
tactcgatcg	agtcaggaaa	tattggaaat	attggaaatt	cttttatgat	tgatcctgtc	5040
ttgggctcta	ttaaaactgc	caaagaatta	gatcgaagta	accaagcggg	gtatgattta	5100
atggtaaaag	ctacagataa	gggcagtcca	ccaatgagtg	aaataacttc	tgtgcgtatc	5160
tttgtcacia	ttgctgacaa	cgcctctccg	aagtttacat	caaaagaata	ttctgttgaa	5220
cttagtgaaa	ctgtcagcat	tgggagtttc	gttgggatgg	ttacagccca	tagtcaatca	5280
tcagtggtgt	atgaaataaa	agatggaaat	acaggtgatg	cttttgatat	taatccacat	5340
tctggaacta	tcatactca	gaaagccctg	gactttgaaa	ctttgcccat	ttacacattg	5400
ataatacaag	gaactaacat	ggctgggttt	tccactaata	caacggttct	agttcacttg	5460
caggatgaga	atgacaacgc	gccagttttt	atgcaggcag	aatatacagg	actcattagt	5520
gaatcagcct	caattaacag	cgtgggtcta	acagacagga	atgtcccact	ggtgattcga	5580
gcagctgatg	ctgataaaga	ctcaaagtgt	ttgcttgat	atcacattgt	tgaaccatct	5640
gtacacacat	attttgctat	tgattctagc	actggtgcta	ttcatacagt	actaagtctg	5700
gactatgaag	aaacaagtat	ttttcacttt	accgtccaag	tgcatgacat	gggaacccca	5760
cgtttatatt	ctgagtatgc	agcgaatgta	acagtacatg	taattgacat	taatgactgc	5820
ccccctgtgt	ttgccaagcc	attatatgaa	gcatctcttt	tgttaccaac	atacaaagga	5880
gtaaaagtca	tcacagtaaa	tgctacagat	gctgattcaa	gtgcattctc	acagttgatt	5940
tactccatca	ccgaaggcaa	catcggggag	aagttttcta	tggactacaa	gactggtgct	6000
ctcactgtcc	aaaacacaac	tcagttaaga	agccgctacg	agctaaccgt	tagagcttcc	6060
gatggcagat	ttgccggcct	tacctctgtc	aaaattaatg	tgaaagaaag	caaagaaagt	6120
cacctaaagt	ttaccagga	tgtctactct	gcggtagtga	aagagaattc	caccgaggcc	6180
gaaacattag	ctgtcattac	tgctattggg	agtccaatca	atgagccttt	gttttatcac	6240
atcctcaacc	cagatcgag	atttaaaata	agccgcactt	caggggttct	gtcaaccact	6300
ggcacgccct	tcgatcgtga	gcagcaggag	gcgtttgatg	tggtttaga	agtgatagag	6360
gaacataagc	cttctgcagt	ggccacggtt	gtcgtgaagg	tcattgtaga	agacccaaat	6420

gataatg	cggtgtt	gt	caaccttccc	tactacgccg	ttgttaaagt	ggacactgag	6480
gtgggccatg	tcattcgcta	tgtcactgct	gtagacagag	acagtggcag	aaacggggaa		6540
gtgcattact	acctcaagga	acatcatgaa	cactttcaaa	ttggaccctt	gggtgaaatt		6600
tcactgaaaa	agcaatttga	gcttgacacc	ttaaataaag	aatatcttgt	tacagtgggt		6660
gcaaaagatg	gagggaaacc	ggccttttca	gcggaagtta	tcgttccgat	cactgtcatg		6720
aataaaagcca	tgctgtgtt	tgaaaaacct	ttctacagt	cagagattgc	agagagcatc		6780
caggtgcaca	gccctgtgg	ccacgtgcag	gctaacagcc	cgggaaggcct	gaaagtgttc		6840
tacagcatca	cagacggaga	ccctttcagc	cagttcacta	ttaacttcaa	tactggagtt		6900
atcaatgtca	tagctcctct	ggactttgag	gcccaccgg	catataagct	gagcatacgc		6960
gcaactgact	ccttgacggg	cgctcatgct	gaagtatttg	tggacatcat	agtagacgac		7020
atcaatgata	accctcctgt	gtttgctcag	cagtcttatg	cggtgaccct	gtctgaggca		7080
tctgtaattg	gaacgtctgt	tgttcaagtt	agagccaccg	attctgattc	agaaccaa		7140
agaggaatct	cataccagat	gtttgggaat	cacagcaaga	gtcatgatca	ttttcatgta		7200
gacagcagca	ctggcctcat	ctcactactc	agaaccctgg	attacgagca	gtcccggcag		7260
cacacgattt	ttgtgagggc	agttgatgg	ggtatgccc	cgctgagcag	tgatgtgatt		7320
gtcacgggtg	acgttaccga	cctcaatgg	aatccaccac	tctttgaaca	acagatttat		7380
gaagccagaa	ttagcgagca	cgccccctcat	gggcatttctg	tgacctgtgt	aaaagcctat		7440
gatgcagaca	gttcagacat	agacaagttg	cagtattcca	ttctgtctgg	caatgatcat		7500
aaacattttg	tcattgacag	tgcaacaggg	attatcaccc	tctcaaacct	gcaccggcac		7560
gccctgaagc	cattttacag	tcttaacctg	tcagtgtctg	atggagtttt	tagaagttcc		7620
accaggttc	atgtaactgt	aattggaggc	aatttgcaca	gtcctgcttt	ccttcagaac		7680
gaatatgaag	tggaactagc	tgaaaacgct	cccctacata	ccctgggtgat	ggaggtgaaa		7740
actacggatg	gggattctgg	tatttatgg	cacgttactt	accatattgt	aaatgacttt		7800
gccaaagaca	gattttacat	aaatgagaga	ggacagatat	ttactttgga	aaaacttgat		7860
cgagaaaccc	cggcgagaa	agtgatctca	gtccgtttta	tggctaagga	tgctggagga		7920
aaagttgctt	tctgcaccgt	gaatgtcatc	cttacagatg	acaatgacaa	tgaccacaa		7980
tttcgagcaa	ccaaatacga	agtgaatatc	gggtccagtg	ctgctaaagg	gacttcagtc		8040
gtaaagtctg	caagtgatgc	cgatgagggc	tccaatgccg	acatcaccta	tgccattgaa		8100
gcagactctg	aaagtgtaaa	agagaatttg	gaaattaaca	aactgtccgg	cgtaatcact		8160

acaaaggaga	gcctcattgg	cttggaaaat	gaattcttca	ctttctttgt	tagagctgtg	8220
gataatgggt	ctccatcaaa	agaatctgtt	gttcttgtct	atgttaaaat	ccttccaccg	8280
gaaatgcagc	ttccaaaatt	ttcagaacct	ttctatacct	ttacagtgtc	agaggacgtg	8340
cctgttgga	cagagataga	tctcatccga	gcagaacata	gtgggactgt	tctttacagc	8400
ctgggtcaaag	ggaatactcc	agaaagcaat	agggatgagt	cctttgtgat	tgacagacag	8460
agcgggagac	tgaagttgga	gaagagtctt	gatcatgaga	caactaagtg	gtatcagttt	8520
tccatactgg	ccaggtgcac	tcaagatgac	catgagatgg	tggcttctgt	agatgttagt	8580
atccaagtga	aagatgcaaa	tgacaacagc	ccggtctttg	aatctagtcc	atatgaggca	8640
ttcattgttg	aaaacctgcc	agggggaagt	agagtaattc	agatcagggc	atctgatgct	8700
gactcaggaa	ccaacggcca	agttatgtat	agcctggatc	agtcacaaag	tgtggaagtc	8760
attgaatcct	ttgccattaa	catggaaaca	ggctggatta	caactttaa	ggaacttgac	8820
catgaaaaga	gagacaatta	ccagattaaa	gtggttgcac	cagatcatgg	tgaaaagatc	8880
cagctatcct	ccacagccat	tgtggatggt	accgtcaccg	atgtcaacga	tagtccacca	8940
cgattcacgg	ccgagatcta	taaagggact	gtgagtgagg	atgaccccca	aggtgggggtg	9000
attgccatct	taagtaccac	ggatgctgat	tctgaagaga	tcaacagaca	agttacatat	9060
ttcataacag	gaggggatcc	tttaggacag	tttgccgttg	aaactataca	gaatgaatgg	9120
aaggtatatg	tgaagaaacc	tctagacagg	gaaaaaagg	acaattacct	tcttactatc	9180
acggcaactg	atggcacctt	ctcatcaaaa	gcgatagttg	aagtgaaagt	tctggatgca	9240
aatgacaaca	gtccagtttg	tgaaaagact	ttatatccag	acactattcc	tgaagacgtc	9300
cttcttgga	aattgatcat	gcagatctct	gctacagacg	cagacatccg	ctctaacgct	9360
gaaattactt	acacgttatt	gggttcaggt	gcagaaaaat	tcaaactaaa	tccagacaca	9420
ggtgaactga	aaacgtcaac	cccccttgat	cgtgaggagc	aagctgttta	tcatcttctc	9480
gtcagggcc	cagatggagg	aggaagattc	tgccaagcca	gtattgtcgt	cacgctagaa	9540
gatgtgaacg	ataacgcccc	cgaattctct	gccgatcctt	atgccatcac	cgtgtttgaa	9600
aacacagagc	cggaacgct	gctgacaaga	gtgcaggcca	cagatgccga	cgcaggatta	9660
aatcggaaga	ttttatactc	actgattgac	tctgctgatg	ggcagttctc	cattaacgaa	9720
ttatctggaa	ttattcagtt	agaaaaacct	ttggacagag	aactccaggc	agtatacacc	9780
ctctctttga	aagctgtgga	tcaaggcttg	ccaaggaggc	tgactgccac	tggcactgtg	9840
attgtatcag	ttcttgacat	aaatgacaac	ccccctgtgt	ttgagtaccg	tgaatatggt	9900

gccaccgtgt ctgaggacat tcttgttggg actgaagttc ttcaagtgtg tgcagcaagt 9960
 cgggatattg aagcaaatgc agaaatcacc tactcaataa taagtggaaa tgaacatggg 10020
 aaattcagca tagattctaa aacagggggc gtatttatca ttgagaatct ggattatgag 10080
 agctctcatg agtattacct aacagtagag gccactgatg gaggcacgcc ttcactgagc 10140
 gacgttgcca ctgtgaacgt taatgtaaca gatatcaacg ataatacccc tgtgttcagc 10200
 caagacacct acacgacagt catcagtga gatgccgttc ttgagcagtc tgtcatcacg 10260
 gttatggccg atgatgccga tggaccttcc aacagccaca tccactactc aattatagat 10320
 ggcaaccaag gaagctcgtt cacaattgac cccgtcaggg gagaagtcaa agtgaccaa 10380
 cttctcgacc gagaaacgat ttcaggttac acgctcacgg ttcaagcttc tgataatggc 10440
 agtccacca gagtcaacac gacgaccgtg aacatcgatg tgtccgatgt caatgacaac 10500
 gcgcccgtct tctccagggg aaactacagt gtcattatcc aggaaaataa gccagtgggc 10560
 ttcagcgtgc tgcagctggg agtaacagat gaggattctt ccataacgg tccacccttc 10620
 ttctttacta ttgtaactgg aaatgatgag aaggcttttg aagttaacct gcaaggagtc 10680
 ctctgacat catctgccat caagaggaag gagaaagatc attacttact gcagggtgaag 10740
 gtggcagata atggaaagcc tcagttgtca tctttgacat acattgacat tagggtaatt 10800
 gaggagagca tctatccgcc tgcgattttg cccctggaga ttttcatcac ctcttctgga 10860
 gaagaatact caggtggcgt cattgggaag atccatgcc cagaccagga cgtgtatgat 10920
 actctaacct acagtctcga cctcagatg gacaacctgt tctctgtttc cagcacaggg 10980
 ggcaagctga tagcacacaa aaagctagac atagggcaat accttctcaa tgtcagcgta 11040
 acagatggga agttcacgac ggtggccgac atcacagtgc atatcagaca agtcacacag 11100
 gagatgttga accacacat cgcatccgc tttgccaacc tctctccgga agaattcggt 11160
 ggtgactact ggcgcaactt ccagcgagct ttacggaaca tcctgggtgt gaggaggaac 11220
 gacatacaga ttgttagttt gcagtcctct gaacctcacc cacatctgga cgtcttactt 11280
 tttgtagaga aaccaggtag tgctcagatc tcaacaaaac aacttctgca caagattaac 11340
 tcttccgtga ctgacattga ggaaatcatt ggagttagga tactgaatgt attccagaaa 11400
 ctctgcgcgg gactggactg cccctggaag ttctgcgatg aaaaggtgtc tgtggatgaa 11460
 agtgtgatgt caacacacag cacagccaga ctgagttttg tgactccccg ccaccacagg 11520
 gcagcgggtg gtctctgcaa agaggggaagg tgcccacctg tccaccatgg ctgtgaagat 11580
 gatccgtgcc ctgagggatc cgaatgtgtg tctgatccct gggaggagaa acacacctgt 11640

gtctgtccca	gcggcaggtt	tggtcagtgc	ccagggagtt	catctatgac	actgactgga	11700
aacagctacg	tgaataaccg	tctgacggaa	aatgaaaaca	aattagagat	gaaactgacc	11760
atgaggctca	gaacatatct	cacgcatgcg	gttgatcatgt	atgctcgagg	aactgactat	11820
agcatcttgg	agattcatca	tggaaggctg	cagtacaagt	ttgactgtgg	aagtggccct	11880
ggaattgtct	ctgttcagag	cattcaggtc	aatgatgggc	agtggcacgc	agtggccctg	11940
gaagtgaatg	gaaactatgc	tcgcttggtt	ctagaccaag	ttcatactgc	atcgggcaca	12000
gccccagggg	ctctgaaaac	cctgaacctg	gataactatg	tggttttttg	tgccacatc	12060
cgtcagcagg	gaacaaggca	tggaagaagt	cctcaagttg	gtaatggttt	caggggttgt	12120
atggactcca	tttatttgaa	tgggcaggag	ctccctttaa	acagcaaacc	cagaagctat	12180
gcacacatcg	aagagtcggt	ggatgtatct	ccaggctgct	tcctgacggc	cacggaagac	12240
tgccgacgca	acccttgcca	gaatggaggc	gtttgcaatc	cgtcacctgc	tggaggttat	12300
tactgcaaat	gcagtgcctt	gtacataggg	acccactgtg	agataagcgt	caatccgtgt	12360
tcctccaacc	catgcctcta	tgggggcacg	tgtgtgtgctg	acaacggagg	ctttgtttgc	12420
cagtgtagag	gattatatac	tggtcagagg	tgtcagctta	gtccatactg	caaagatgaa	12480
ccctgtaaga	atggcggaac	atgctttgac	agtttggtatg	gcgccgtttg	tcagtgtgat	12540
tcgggtttta	ggggagaaaag	gtgtcagagt	gatatcgacg	agtgtctctg	aaacccttgc	12600
ctgcacgggg	ccctctgtga	gaacacgcac	ggctcctatc	actgcaactg	cagccacgag	12660
tacaggggac	gtcactgcga	ggatgctgcg	cccaaccagt	atgtgtccac	gccgtggaac	12720
attgggtttg	cggaagggaat	tggaatcggt	gtgtttgttg	cagggatatt	tttactggtg	12780
gtggtgtttg	ttctctgccg	taagatgatt	agtcggaaaa	agaagcatca	ggctgaacct	12840
aaagacaagc	acctgggacc	cgctacggct	ttcttgcaaa	gaccgtatct	tgattccaag	12900
ctaaataaga	acattttactc	agacatacca	ccccagggtgc	ctgtccggcc	tatttcctac	12960
accccgagta	ttccaagtga	ctcaagaaac	aatctggacc	gaaattcctt	cgaaggatct	13020
gctatcccag	agcatcccga	attcagcaact	tttaaccccg	agtctgtgca	cgggcaccca	13080
aaagcagtgg	cggctctgcag	cgtggcgcca	aacctgcctc	ccccaccccc	ttcaaactcc	13140
ccttctgaca	gcgactccat	ccagaagcct	agctgggact	ttgactatga	cacaaaagtg	13200
gtggatcttg	atccctgtct	ttccaagaag	cctctagagg	aaaagccttc	ccagccatac	13260
agtccccggg	aaagcctgtc	tgaagtgcag	tccttgagct	ccttccagtc	cgaatcgtgc	13320
gatgacaatg	ggtatcactg	ggatacatca	gattggatgc	caagcgttcc	tctgccggac	13380

```

atacaagagt tccccaaacta tgagggtgatt gatgagcaga caccctgtga ctgagcagat 13440
ccaaacgcca tcgatacgga ctattaccct ggaggctacg acatcgaaag tgattttcct 13500
ccacccccag aagacttccc cgcagctgat gagctaccac cgttaccgcc cgaattcagc 13560
aatcagtttg aatccatcca cctcctaga gacatgcctg ccgcgggtag cttgggttct 13620
tcatcaagaa accggcagag gttcaacttg aatcagtatt tgcccaattt ttatcccctc 13680
gatatgtctg aacctcaaac aaaaggcact ggtgagaata gtacttgtag agaaccat 13740
gcccttacc cgccagggtg tcaaagacac ttcgaggcgc ccgctgtcga gagcatgccc 13800
atgtctgtgt acgcctccac cgctcctgc tctgacgtgt cagcctgctg cgaagtggag 13860
tccgagggtca tgatgagtga ctatgagagc ggggacgacg gccacttcga agagggtgacg 13920
atcccccccc tggattccca gcagcacacg gaagtctgac tctcaactcc ccccaaagtg 13980
cctgacttta gtgaacctag aggtgatgtg agtaatccgc gctgttcttt gcagcagtgc 14040
ttccaagctt tttttggtga gccgaatggg catggctgcg ctggatcctg cgctctgga 14100
cgtgctagcc atttccagtg tcccaactac tgtcatcgtg aggttttcat cggtgtgcc 14160
atttcccaac gtcttttggg atttacatct gtctgtgtta aaataatcaa acgaaaaatc 14220
agtcctgtgt tgtcagcatg attcatgtat ttatatagat ttgattattt taattttcct 14280
gtctcttttt tttgtaaatt ttatgtacag atttgatttt tcatagtttt aactagattt 14340
ccaagatatt ttgtgcattt gtttcaactg aattttggtg gtgtcagtgc cattatctag 14400
caccctgatt tttttttttt tactataacc agggtttcat tctgtctttt tccactgaag 14460
tgtgacattt tgtagtagta tttcagtgtg gtcattcatt tctagctgta cataggatga 14520
aggagagatc agatacatga acatgtctta catgggttgc tgtatttaga attataaaca 14580
tttttcatta ttggaaagtg taacggggac cttctgcata cctgtttaga accaaaacca 14640
ccatgacaca gtttttatag tgtctgtata tttgtgatgc aatggctctg taaagggttt 14700
taatgaaaac taccattagc cagtctttct tactgacaat aaattattaa taaaat 14756

```

<210> 25

<211> 6896

<212> DNA

<213> Homo sapiens

<400> 25

```

catgccacat ccccggggcg ggagggggct acatccccgg ctttagacgc gcgagtctca 60
ggtecccgta attacctggc ggggtgctgcc caccctgcc ctgcgcgacc tagcgctgg 120
cagcgggaag gcggggcctg ggggagcccc acccctggag actgcggctg gggcctccct 180

```

ctcctccgcc	cgcccgctg	ccactagctc	attgcgctc	tcctgcagtc	tgattgggca	240
ccggctccca	ttccggctcc	agcctccaat	ccgaccccca	tttcggctgc	agcctcggac	300
ctagctccgg	ccctcggtct	atccggttgc	atcctccctc	cctgttcggg	atcttatctt	360
gcgccagcgc	ctactccagg	atcccgtagc	cagacctcaa	gccatggctg	gtcccttctc	420
ccgtctgctg	tcgccccgcc	cgggactcag	gctcctggct	ttggccggag	cggggtctct	480
agccgctggg	tttctgctcc	gaccggaacc	tgtacgagct	gccagtgaac	gacggaggct	540
gtatcccccg	aggtaacagt	gcctgaggcg	cgggaggagg	cgggggcagg	aggtgatggg	600
aacgaagggt	cgggtagaag	tgagaatccg	ggcaacagag	aagggtata	atcacgaagg	660
ccctggagct	ggagggtgtg	gcagtctgca	gacctcagtg	gggtgggggt	gggggccaaa	720
accataaagc	aagaacattc	ctggggacct	gccaaagcca	gctctggccc	tacgagttct	780
agctgcactg	gctgccccaa	tccttaattg	taaagccagg	aactatcctt	ttcgctcccc	840
tccatctcct	tcctcathtt	cctcaattcc	tctccttagg	cttttcccct	cctccatccg	900
tagtgttgtg	tcatgggagg	aaagaactga	gcagatctga	agaaactgag	ctggccagcc	960
agaggcaact	agaactatta	ggaaagcata	gactctgaaa	gtccctaaag	agattaccaa	1020
ggtttaccct	ctttctaatt	cccctcctcc	cgoggagcaa	agccagacat	ggccaactgg	1080
acagctccca	ggtaactgca	ctaggtctag	gcgtctgtga	ccctccctcc	atgggtactg	1140
ggtagccccct	ccccagcgtc	gagtacccag	acctccgaaa	gcacaacaac	tgcatggcca	1200
gtcacctgac	cccagcagtc	tatgcacggc	tctgcgacaa	gaccacacc	actggttga	1260
cgctagatca	gtgtatccag	actggcggtg	acaaccctgg	ccacccttc	atcaagactg	1320
tgggcatggg	ggctggagat	gaggagacct	atgaggtagg	gggtccccag	agtctccctg	1380
atgatccaat	tcatcttccc	agtaatccca	gctcctttcc	cttaaagacc	tctcactttc	1440
ccccaaagact	ctgagcccc	catacttaag	ttttctgaac	cagtgaaatc	aatgcacaat	1500
tgaagtctgg	ggagggattc	cctctcctta	accatctctc	cctcttaact	ccccttaggt	1560
atttgctgac	ctgtttgacc	ctgtgatcca	agagcgacac	aatggatatg	acccccggac	1620
aatgaagcac	accacggatc	tagatgccag	taaagtgagt	tcaaatatcc	cacttctgat	1680
ttgcattgcc	tgtgtacaac	actctgtatc	tccaaccctc	tcaccttatt	tcctgactca	1740
tggtcattat	actgctgagc	ttttaatctt	aatgtaagga	aagaatcata	tcttaagggg	1800
cagcatatat	ggagatggaa	ggatagataa	gaatgaccat	gaccaagggt	gggtggtttg	1860
gggacgggtc	tgcaatgccc	ccttcaattc	cagtgccttc	ccaaagggcc	tcttcttcca	1920

atgcatgcag	gaagaatgca	cacagagtcc	tctaatagcct	aaggaaggtc	tctcctttcc	1980
cagggggccct	cagttcccac	cgtgtttctg	tgacttacat	tcatttccct	tatctcccag	2040
atccgttctg	gctactttga	tgagaggtat	gtattgtcct	ctagagtcag	aactggccga	2100
agcatccgag	gactcagtct	gcctccagct	tgcactcgag	cagagcgacg	agaggtggaa	2160
cgtgttggtg	tggatgcact	gagtggcctg	aagggtgacc	tggctggacg	ttactatagg	2220
ctcagtgaga	tgacagaggc	tgaacagcag	cagcttattg	atgtgagggc	cttaagaggg	2280
tgctgggttg	tgggagcaga	tggggaaggc	tgggccagat	gagacatggg	ctctgaaagg	2340
cccagggggc	accatgaaga	ttcttaacct	aagtcctgtt	actcttccca	ggaccacttt	2400
ctgtttgata	agcctgtgtc	cccgttgctg	actgcagcag	gaatggctcg	agactggcca	2460
gatgctcgtg	gaatttggtg	tgaagctgct	cattacctct	tttgtcttca	tgccctcata	2520
aatgcttttt	ttccctctat	ctctcccaat	tcttgcttgc	cctcttgatc	actgtccctc	2580
tccggccctc	aggcacaaca	atgagaagag	cttctgctgc	tgggtgaatg	aggaggatca	2640
tacacgggtg	atctccatgg	agaaggggtg	taacatgaag	agagtgtttg	aaagattctg	2700
ccgaggcctc	aaagagggtg	gagaagacta	tgtaggggag	ctaggtggga	ggacataagg	2760
aaaaccaaag	agtagcataa	atagattatg	taattttacca	accaaccag	gacatgtctt	2820
atagtaaaaa	ggactatcta	ggactcactc	caggactaaa	gggtgtaaacc	agctgggacc	2880
atactgggaa	aaccaggaca	tgtgggtcaca	ctaagattag	gaaaagaaaag	agtgtcagga	2940
atcttaggaa	gtgaacaagg	cttttgacag	agagtgcata	gaaggaataa	atgagatggc	3000
acgtcagtgc	ctgggatgtg	tgcagtggga	tgggtgaggtg	tgcagataag	gaaaacattc	3060
gagcttagat	tgatgttggc	ggggagaggt	tgctgtgttc	atgactctaa	tataaccacc	3120
cagttctgag	acaaggtagg	ccttgactct	ggattctatc	attcttggtg	aagtttcggg	3180
tctaggcttt	aagttgagag	ttcggagaga	gactggggaa	gggtggaggat	agaatgggtc	3240
gagttctaga	atatgtggct	ctagatgaga	ggttgaactg	aatcatcaat	cctacatgga	3300
ttgggtctcc	gtattcaagt	ctacattaga	aatccccata	aactcaattc	aattcttact	3360
gtatgttctc	aaacatacag	ttctatttta	ggtttgcaaa	gaaaaagagc	tcctctttta	3420
gattctgaga	agtttctact	atttttggca	agtaatatag	aacatattct	gactatgagt	3480
gggtagggaa	gtacctttta	attatatgcc	tcagtttccct	catctgtaaa	attgggataa	3540
tgagattttc	tacatttttag	gttggtgttg	ggattaagtg	aaatacaggt	aaagtacttg	3600
gtccacagta	agtgcttaat	aagtggttaa	gtgttagctg	caatattatt	ctggatggaa	3660

gagtttcccc	ccatgttcag	catgtaagat	atcccctatg	gcatgggtcc	ttctgaacta	3720
taaagaggat	ccctttactc	atgttgggtt	gtgggtcttg	tgaccatcat	tctgctagat	3780
cccttgctctc	ttgaactcta	atagtcatct	tcatgactac	atgggttaagt	gaagccaaac	3840
gccttcccc	cgccccctat	tcctatgaat	ctggcttttc	tgctctgttt	tcatctttct	3900
ctgcattcac	acaggtgctc	cgttcacagc	taacagaatg	ttatcttacc	tcttcctggc	3960
aaagcttaca	ccttcatctt	ctgtctgaag	ggacccttct	aagctctagg	ctcattagca	4020
aagcaaagat	aatcgatgca	tgcagacctc	attgaataat	cagtcatctc	tcagttcagt	4080
ttaccacctc	tgttcatttc	cctagatcat	ccttaataca	ccactccttc	gagttttctt	4140
cttccacata	agatattttt	tcacaatctc	attattatgc	acatcataat	tttgcatcat	4200
gcatgcatga	aaacaataac	aaaccttttt	catttaaaaa	aagaccaatg	tcattcattc	4260
acagccaagt	ttctgttcta	gacatatttc	tagtgttctt	gtgggtctag	ctaagggagg	4320
gtccaggggt	aatgaaatat	ccctgatttt	tcgttaacaa	aacctttgtg	gactcaggtg	4380
gagagactta	tccaagaacg	tggctgggag	ttcatgtgga	atgagcgttt	gggatacatc	4440
ttgacctgtc	catctaacct	gggcactgga	cttcgggcag	gagtgcacat	caaactgccc	4500
ctgctaagca	aagtaaagga	gttgtggggt	tacagagggg	tgtgagtaag	gaagggggg	4560
ttgtggatgg	ggagggagtg	gaccttttgg	aaaggagcca	aacatgttgt	ggctaaaggg	4620
tcagaggaca	ggccaggcac	agtggctcat	gcctctaate	ccaacacttg	ggaggccaag	4680
gcaggcagat	tacttgagcc	caggagttca	agaccagcct	gggcaacctg	gtgaaacccc	4740
atctctacct	acaaatacaa	aagttagctg	gggtgtagtg	aggctgaggt	gagaggatca	4800
cttaagcctg	ggaagtcgag	gcttcagtga	gctgtgatca	ctccagcctg	ggtgacagag	4860
agagaccctg	tctaaaaaaaa	attaaaaaag	aaaaaagaaa	aaaggaaaaa	aaaagttcag	4920
gagacagagc	tctgagcagg	ttcagggtct	tttcaggtag	gacctagtct	ctgcctctat	4980
tgaccctgct	cccaatccct	atctcctctc	taggatagcc	gcttcccaaa	gatcctggag	5040
aacctaagac	tccaaaaaacg	tggtactgga	ggagtggaca	ctgctgctac	aggcgggtgc	5100
tttgatattt	ctaatttgga	ccgactaggc	aaatcagagg	tgagatccta	agggattagg	5160
acaaggagag	gtataggtct	gcgagggccg	aaatatggca	gtgagtgagc	ctccgggatg	5220
taacataatc	tgaaatgaaa	ttcagggtga	gtgggaggca	attggaaatg	agcaggcaag	5280
tcagtcagtg	ataaagaaaa	actcagactg	taggaagcag	atcaaagatt	agtgtccctt	5340
aggtggagct	ggtgcaactg	gtcatcgatg	gagtaaaacta	tttgattgat	tgtgaacggc	5400

gtctggagag	aggccaggat	atccgcatcc	ccacacctgt	catccacacc	aagcattaac	5460
tccccatcgc	cagctgatga	ctcaagattc	ccaggagttt	tgctcattct	aatgatggcc	5520
cattctactt	gctctggacc	tgcccccgca	tccccctgcct	ccatccctagt	aaagactcct	5580
tgctatgctg	cagctgtctg	tgttactttct	aatgggtgggg	tgaggagggga	gcagccttca	5640
ggaaatgaaa	agaggcagtg	ggattatttta	tgatggaaaag	agactccaga	tatggcaacc	5700
caggaacact	gattctcagg	tgggtggaaa	gcattaacat	tttaccata	ttcctcatca	5760
gcttctgaaa	ataatcagga	tgcactttctg	tttgcacttt	attcattatg	acttaagatt	5820
tctctcccca	caatctcctt	ctactgtaga	gacaggctca	tagcagggtg	ccaaggaagc	5880
tgatagtcaa	taccagggac	caggaaggtc	gtgaccagtc	ctggaggccc	caggctgtac	5940
ttcgacctat	aatagacagg	gaatgggagt	aatatcacaa	ctcagctctc	caggagcatt	6000
gataacttga	aattagcgct	ctgcctgtag	actccttcac	tccagggatc	tccctgggtg	6060
cactctaaga	gccagacagc	accaaattag	gggtttgatt	ctgggtcagg	agatggagga	6120
tcaagctgtg	cagctgggaa	ctcaccttgc	tgttctgggc	tctcctttcc	ctcatgttgg	6180
gcccattgcaa	ctgctcgtcg	ctgctcagga	ctcagaaagg	ccatttgctc	aggagtgaca	6240
gccacagcct	gagcactgg	gagactagat	agttggatgg	gactaaacac	cacctgaggg	6300
caggggtagg	aatcagtgc	tgcatgtagt	ccccattggg	ccctggctct	cctgtgggtca	6360
ccccagtcca	ttaatactta	cagcaaattt	aggaggaggg	atgacagaaa	tggcaagagg	6420
agtaacgccc	tggatctgtc	cccgcagcag	tgctgaaaga	gccaggctctg	ggatcccagc	6480
tgttgaagca	agtggcatcc	aaacattgtc	ttagactgac	cttccctctc	ttcaaaccta	6540
tagaccttct	ctaactactc	ccaaagtgcc	ctatcataga	ccttcccca	tatgtctcta	6600
gccccttatt	taaacaccct	caggccccca	ccttaagaat	tgcagggcag	tcttccatcc	6660
agtccacca	tggatatagaa	accaaaccac	cttgaccag	cagtggcca	gctccccacc	6720
tgctatgggtg	ccaatttcag	tgaagatctc	aggccccag	ttactgattg	ggccaaaccc	6780
accaggcagt	acaagtaggt	gggccagaac	ctccagttgt	tcctcagagc	actgcagatg	6840
cagggtgccg	aggaagagag	ctgcttggtc	gtagaacagt	gggaaggaag	gaagaa	6896

<210> 26

<211> 822

<212> DNA

<213> Homo sapiens

<400> 26
acggaacaga tccggggact ctcttccagc ctccgaccgc cctccgattt cctctccgct 60
tgcaacctcc gggaccatct tctcggccat ctctgcttc tgggacctgc cagcaccggt 120
tttgtgggta gctccttctt gccaaccaac catgagctcc cagattcgtc agaattattc 180
caccgacgtg gaggcagccg tcaacagcct ggtcaatttg tacctgcagg cctcctacac 240
ctacctctct ctgggcttct atttcgaccg cgatgatgtg gctctggaag gcgtgagcca 300
cttcttccgc gaactggccg aggagaagcg cgaggggtac gagcgtctcc tgaagatgca 360
aaaccagcgt ggcggcccg ctctcttcca ggacatcaag aagccagctg aagatgagtg 420
gggtaaaacc ccagacgcca tgaaagctgc catggccctg gagaaaaagc tgaaccaggc 480
ccttttggat cttcatgccc tgggttctgc ccgcacggac ccccatctct gtgacttcct 540
ggagactcac ttcctagatg aggaagtga gcttatcaag aagatgggtg accacctgac 600
caacctccac aggctgggtg gcccggaggc tgggctgggc gagtatctct tcgaaaggct 660
cactctcaag cacgactaag agccttctga gccacgcgac ttctgaaggc ccccttgcaa 720
agtaataggg cttctgccta agcctctccc tccagccaat aggcagcttt cttaactatc 780
ctaacaagcc ttggaccaaa tggaaataaa gctttttgat gc 822

<210> 27

<211> 2859

<212> DNA

<213> Homo sapiens

<220>

<221> modified_base

<222> (1763)..(1763)

<223> a, c, t, g, unknown or other

<400> 27

agctgcatta taagagacag atgtaccaac agcaaccaga ggagtataaa gactggagca 60
gcggttctgc tcagggagta attgctgcag cacagcacag gcaggagggg ccacggaaga 120
gtccaaggca gcagcagttt cttgacagag tacggagccc tctgaaaaat gacaaagatg 180
gtatgatgta tggcccacca gtggggactt accatgaccc cagtgccag gaggctgggc 240
gctgccta atgtctagtgat ggtctgccta acaagggcat ggaattaaag catggctccc 300
agaagttaca agaatcctgt tgggatcttt ctcggaacac ttctccagcc aaaagcagcg 360
gtcctccagg aatgtccagt caaaaaaggt atgggcccgc ccatgagact gatggacatg 420
gactagctga ggctacacag tcatccaaac ctggtagtgt tatgctgaga cttccaggcc 480
aggaggatca ttcttctcaa aaccccttaa tcatgaggag gcgtgttcgt tcttttatct 540

ctccattcc	cagtaagaga	cagtcacaag	atgtaaagaa	cagtagcact	gaagataaag	600
gtcgctcct	tcactcatca	aaagaaggcg	ctgataaagc	attcaattcc	tatgcccac	660
tttctcacag	tcaggatatc	aagtctatcc	ctaagagaga	ttcctccaag	gaccttccaa	720
gtccagatag	tagaaactgc	cctgctgtta	ccctcacaag	ccctgctaag	acaaaaatac	780
tgccccacg	gaaaggacgg	ggattgaaat	tggaagctat	agttcagaag	attacatccc	840
caaataattag	gaggagcgca	tcttcgaaca	gtgcggaggc	tgggggagac	acgggttacgc	900
ttgatgatat	actgtctttg	aagagtggtc	ctcctgaagg	tgggagtgtt	gctgttcagg	960
atgctgacat	agagaagaga	aaaggtgagg	tggcttcgga	cctagtcagt	ccagcaaacc	1020
aggagttgca	cgtagagaaa	cctcttccaa	ggctctcaga	agagtggcgt	ggcagcgtgg	1080
atgacaaagt	gaagacagag	acacatgcag	aaacagttac	tgccggaaag	gaacccccctg	1140
gtgccatgac	atccacaacc	tcacagaagc	ctggtagtaa	ccaagggaga	ccagatgggtt	1200
ccctgggtgg	aacagcacct	ttaatctttc	cagactcaaa	gaatgtacct	ccagtgggca	1260
tattggcccc	tgaggcaaac	cccaaggctg	aagagaagga	gaacgataca	gtgacgattt	1320
caccgaagca	agagggtttc	cctccaaagg	gatatttccc	atcaggaaag	aagaagggga	1380
gacccattgg	tagtgtgaat	aagcaaaaga	aacagcagca	gccaccgcct	ccacccccctc	1440
agccccaca	gataccagaa	ggttctgcag	atggagagcc	aaagccaaaa	aaacagaggc	1500
aaaggagggg	gagaaggaag	cctggggccc	agccgaggaa	gcgaaaaacc	aaacaagcag	1560
ttccatttgt	ggaaccccaa	gaacctgaga	tcaaaactaaa	atatgccacc	cagccactgg	1620
ataaaaactga	tgccaagaac	aagtcttttt	acccttacat	ccatgtagta	aataagtgtg	1680
aacttgagc	cgtttgtaca	atcatcaatg	ctgaggaaga	agaacagacc	aaattagtga	1740
ggggcaggaa	gggtcagagg	tcnctgacct	ctccacctag	cagcactgaa	agcaaggcgc	1800
tcctggcctc	gtccttttatg	ctgcaggggac	ctgttgtagc	agagtcttcg	gttatggggc	1860
acctggtttg	ctgtctgtgt	ggcaagtggg	ccagttaccg	gaacatgggt	gacctctttg	1920
gaccttttta	tccccaaagt	tatgcagcca	ctctcccgaa	gaatccacct	cctaagaggg	1980
ccacagaaat	gcagagcaaa	gttaagggtac	ggcacaaaag	tgcttctaata	ggctccaaga	2040
cggacactga	ggaggaggaa	gagcagcagc	agcagcagaa	ggagcagaga	agcctggccg	2100
cacaccccag	gtttaagcgg	cgccaccgct	cggaagactg	tggtggaggc	cctcgggtccc	2160
tgtccagggg	gctcccttgt	aaaaaagcag	ccactgaggg	cagcagtga	aagactgttt	2220
tggactcgaa	gccctccgtg	cccaccactt	cagaagggtg	ccctgagctg	gagttacaaa	2280

tccctgaact	acctcttgac	agcaatgaat	tttgggtcca	tgagggttgt	attctctggg	2340
ccaatggaat	ctacctgggt	tgtggcaggc	tctatggcct	gcaggaagcg	ctggaaatag	2400
ccagagagat	gaaatgttcc	cactgccagg	aggcaggcgc	caccttgggc	tgctacaaca	2460
aaggctgctc	cttccgatac	cattaccogt	gtgccattga	tgagattgt	ttgctacatg	2520
aggagaactt	ctcggtgagg	tgccctaagc	aacaagggtga	gactgtggag	atgagaaggt	2580
gggtggacact	cgtgatggaa	tggaaatcgt	cctaccgtgc	agccacaccc	tgccctgccc	2640
cgccccgccc	cgccccgctg	cctgcccattg	ccagcacttc	cttaagttct	cacatcacac	2700
tcaaaccagt	gacaccacag	gaaagaaaga	cccaagacgt	tggaatggct	gtttccatgg	2760
acacaatctc	catagtgaca	atgtgggggg	aggggggagg	gggtgggatga	tggggaaagg	2820
gtgggggggra	ttaaaaggga	gggataaata	tatatatat			2859

<210> 28

<211> 1365

<212> DNA

<213> Homo sapiens

<400> 28

cactgcttga	gccgctgaga	gggtggcgac	gtcggggcca	tggggctggg	cccgggtcttc	60
ctgcttctgg	ctggcatctt	cccttttgca	cctccgggag	ctgctgctga	gccccacagt	120
cttcgttata	acctcacggt	gctgtcctgg	gatggatctg	tgagtcagg	gtttctcact	180
gaggtacatc	tggatggtca	gcccttcctg	cgctgtgaca	ggcagaaatg	cagggcaaag	240
ccccagggac	agtgggcaga	agatgtcctg	ggaaataaga	catgggacag	agagaccaga	300
gacttgacag	ggaacggaaa	ggacctcagg	atgaccctgg	ctcatatcaa	ggaccagaaa	360
gaaggcttgc	attccctcca	ggagattagg	gtctgtgaga	tccatgaaga	caacagcacc	420
aggagctccc	agcatttcta	ctacgatggg	gagctcttcc	tctcccaaaa	cctggagact	480
aaggaatgga	caatgccccca	gtcctccaga	gtcagacct	tggccatgaa	cgtcaggaat	540
ttcttgaagg	aagatgccat	gaagaccaag	acacactatc	acgctatgca	tgagactgc	600
ctgcaggaac	tacggcgata	tctaaaatcc	ggcgtagtcc	tgaggagaac	agtgcccccc	660
atggtgaatg	tcacccgcag	cgaggcctca	gagggcaaca	ttaccgtgac	atgcagggct	720
tctggcttct	atccctggaa	tatcacactg	agctggcgtc	aggatggggt	atctttgagc	780
cacgacaccc	agcagtgggg	ggatgtcctg	cctgatggga	atggaaccta	ccagacctgg	840
gtggccacca	ggatttgcca	aggagaggag	cagaggttca	cctgctacat	ggaacacagc	900

gggaatcaca	gcactcacc	tgtgccctct	gggaaagtgc	tgggtgcttca	gagtcattgg	960
cagacattcc	atgtttctgc	tgttgctgct	gctgctat	ttgttattat	tattttctat	1020
gtccgttggt	gtaagaagaa	aacatcagct	gcagaggggc	cagagctcgt	gagcctgcag	1080
gtcctggatc	aacacccagt	tgggacgagt	gaccacaggg	atgccacaca	gctcggattt	1140
cagcctctga	tgtcagatct	tgggtccact	ggctccactg	agggcgcccta	gactctacag	1200
ccaggcagct	gggattcaat	tccctgcctg	gatctcacga	gcactttccc	tcttggtgcc	1260
tcagtttctc	gacctatgaa	acagagaaaa	taaaagcact	tatttattgt	tgttgagggc	1320
tgcaaaatgt	tagtagatat	gaggcgtttg	cagctgtacc	atatt		1365

<210> 29

<211> 4268

<212> DNA

<213> Homo sapiens

<400> 29

ggatcccggg	ctccccgggc	tgtgggctac	aggcgagag	cgggccaggc	gcggagctgg	60
cggcagtgac	aggaggcgcg	aaccgcgagc	gcttaccgcg	cggcgccgca	ccatggagcc	120
cgccgtgtcg	ctggccgtgt	gcgcgtgct	cttctgctg	tgggtgcgcc	tgaaggggct	180
ggagttcgtg	ctcatccacc	agcgtctggg	gttcgtgtgc	ctcttctctc	tgccgctctc	240
gcttatcttc	gatatctact	actacgtgcg	cgctgggtg	gtgttcaagc	tcagcagcgc	300
tccgcgcctg	cacgagcagc	gcgtgcggga	catccagaag	caggtgcggg	aatggaagga	360
gcagggtagc	aagaccttca	tgtgcacggg	gcgcctggc	tggctcactg	tctcactacg	420
tgtcgggaag	tacaagaaga	cacacaaaaa	catcatgata	aacctgatgg	acattctgga	480
agtggacacc	aagaaacaga	ttgtccgtgt	ggagcccttg	gtgaccatgg	gccaggtgac	540
tgccctgctg	acctccattg	gctggactct	ccccgtgttg	cctgagcttg	atgacctcac	600
agtggggggc	ttgatcatgg	gcacaggcat	cgagtcata	tcccacaagt	acggcctggt	660
ccaacacatc	tgactgctt	acgagctggg	cctggctgat	ggcagctttg	tgcatgcac	720
tccgtccgaa	aactcagacc	tgttctatgc	cgtaccctgg	tcctgtggga	cgctgggttt	780
cctggtggcc	gctgagatcc	gcatcatccc	tgccaagaag	tacgtcaagc	tcgttttcga	840
gccagtgcgg	ggcctggagg	ctatctgtgc	caagttcacc	cacgagtc	agcggcagga	900
gaaccacttc	gtggaagggc	tgtctactc	cctggatgag	gctgtcatta	tgacaggggt	960
catgacagat	gaggcagagc	ccagcaagct	gaatagcatt	ggcaattact	acaagccgtg	1020
gttctttaag	catgtggaga	actatctgaa	gacaaaccga	gagggcctgg	agtacattcc	1080

cttgagacac	tactaccacc	gccacacgcg	cagcatcttc	tgggagctcc	aggacatcat	1140
cccctttggc	aacaacccca	tcttccgcta	cctctttggc	tggatggtgc	ctcccaagat	1200
ctccctcctg	aagctgaccc	agggtgagac	cctgcgcaag	ctgtacgagc	agcaccacgt	1260
ggtgcaggac	atgctggtgc	ccatgaagtg	cctgcagcag	gccctgcaca	ccttccaaaa	1320
cgacatccac	gtctacccca	tctggctgtg	tccgttcata	ctgcccagcc	agccaggcct	1380
agtgcacccc	aaaggaaatg	aggcagagct	ctacatcgac	attggagcat	atggggagcc	1440
gcgtgtgaaa	cactttgaag	ccaggctcctg	catgaggcag	ctggagaagt	ttgtccgcag	1500
cgtgcatggc	ttccagatgc	tgtatgccga	ctgctacatg	aaccgggagg	agttctggga	1560
gatgtttgat	ggctccttgt	accacaagct	gcgagagaag	ctgggttgcc	aggacgcctt	1620
ccccgaggtg	tacgacaaga	tctgcaaggc	cgccaggcac	tgagctggag	cccgcctgga	1680
gagacagaca	cgtgtgagtg	gtcaggcata	ttcccttcac	tcaagcttgg	ctgctttcct	1740
agatccacac	tttcaaagag	aaacccctcc	agaactccca	ccctgacagc	ccaacaccac	1800
cttcctcctg	gcttccaggg	ggcagcccag	tggaatggaa	agaatgtggg	atltggagtc	1860
agacaagcct	gagtccagtt	ccccgtttag	aactcattag	ctgtgtgact	ctgggtgagt	1920
cccttaaccc	ctctgagccc	gggtctcttc	attagttgaa	agggatagta	atacctactt	1980
gcaggttggt	gtcatctgag	ttgagcactg	gtcacattga	aggtgctggg	taagtggtag	2040
ctcttgttgc	ttcccgttca	gcgtcacata	tgcagtggag	cctgaaaagg	ctccacatta	2100
ggtcacctgt	gcacagccat	ggctggaatg	atgaagggga	tacgctggag	ttgcctgcc	2160
atcgctcca	tcagccagac	gaggtcctca	caggagaagg	acagctcttc	cccaccctgg	2220
gatctcagga	gggcagccac	ggagtgggga	ggccccagat	gcgctgtgcc	aaagccaggt	2280
ccgaggccaa	agttctccct	gccatccttg	gtgccgtcct	gccccttcct	ccttcattgcc	2340
tgggcctgca	ggcccacccc	agccactact	gagtccactc	ggagtgccct	gtgttcctgg	2400
agaaggcatt	ccagggttga	atcttgtccc	agcctcagcc	tgggacacct	aggtggagag	2460
agtggctccc	gctctgaatt	ggatccaggg	gacctgggct	cattcttctt	ggctcaccaa	2520
ccctgcaggc	ctcatctttc	ccaaaaccca	ctttgtcttg	gtgggagtgg	gtccgcgctg	2580
ctctgcagca	ggggctgggg	agtggacagc	atcaggtggg	aaagtggagt	ccaccctcat	2640
gtttctgtag	gattctcacc	gtggggctgg	aagaaaagag	catcgacttg	atttctccaa	2700
ccactcatcc	ctctttttct	ttcttccacc	actccccacc	ccagctgtag	ttaatttcag	2760
tgccttacaa	atcctaagct	cagagaaagt	tccatttccg	ttccagaggg	aagggaacct	2820

ccctaggtcc	ttccctggct	tgttataacg	caaagcttgg	ttgtttatgc	aactctatct	2880
taagaactgc	ccagcctcag	ctgaaaaccc	gaatctgaga	aggaattgcg	tcatgtaagg	2940
gaagctggaa	ttaagggagc	tgagccagtc	atggttgtgg	cgtgtgagtc	aggagaccta	3000
ggtttcagcc	cctctctact	gtcagcgagc	tgtgcaacgt	gggcaagtca	ttgtcctctg	3060
agctgcagtt	tcctcatctg	tcacatcgct	acagacaaga	cctccctgga	acccttctga	3120
ttgtcttaga	cactgtgggt	gcaaaaccca	cggaaagcct	catttgtgtg	gaaagtcaga	3180
ggaaaaatga	tccagtggac	acttggggat	tatctgtcat	tcaagatcct	tccttcaacc	3240
ccaaggtcag	ctcccatctc	atctccagaa	aggctcatac	ctggcttgca	gggaagcatc	3300
tgtcttgtca	ttccaggtgc	cagaatcctc	tcagagtcac	tgaagggtgt	tcacccatcc	3360
cacccaaggc	ttggcacact	gccagtgtct	tagcagggtc	ttgtgagggc	tgggggcatc	3420
caggcactca	gaaggcaaag	gaaccaccct	accatcttgg	cctctggagg	gggcagaaga	3480
aagaaagaaa	cctcatccta	tattttacaa	agcatgtgaa	ttctggcatt	agctctcata	3540
ggagacccat	gtgcttcctt	gctcagtgc	aaactgatga	ttctacttgc	tgtagatgaa	3600
tggttaacac	gagctagtta	aacagtgcc	ttgttttgcc	agtgaagcct	ccaaccctaa	3660
gccactggga	cgggtggccag	agatgccagc	agcctctgtc	gcccttagtc	atataaccaa	3720
aatccagacc	ttatccacaa	cccggggcct	ggaaaggaag	gtatttttga	atcacaccct	3780
ccggttatgt	tgctccagta	aaatcttgcc	tggaaagagg	cagtcttctt	agcatgggtga	3840
gctgagttca	tggctttttt	ttgtagccag	tcctgtccct	ggccatccat	gtgatgggtt	3900
tggatggagt	taaacttgat	gccagtgggc	agtgcattgt	gaaagtatca	gagtaaggct	3960
ctcccctcca	gagccctgag	tttcttggct	gcatgaaggt	tttctttaga	atcagaattg	4020
tagccagttt	ctttggccag	aaggatgaat	acttgatat	tactgaaagg	gaggggtgga	4080
gatgggtgtg	gcagtgtatg	gtgtgtgatt	tttattttct	tcttttgtca	tgggggccaa	4140
ggagaaaggc	atgaatcttc	cctgtcaggc	tcttacagcc	acaggcactg	tgtctactgt	4200
ctggaagaca	tgtccccgtg	gctgtggggc	cgtgtcttct	gtttaaataa	aagtggcctg	4260
gaagctgg						4268

<210> 30

<211> 498

<212> DNA

<213> Homo sapiens

<400> 30
 ttaaagcaaa gaattccccg gtcccagcca tgtccaacgt cccccacaag tcctcgctgc 60
 ccgagggcat ccgccctggc acggtgctga gaattcgcg cttgggttcct cccaatgcca 120
 gcaggttcca tgtaaacctg ctgtgcgggg aggagcaggg ctccgatgcc gccctgcatt 180
 tcaacccccg gctggacacg tccgaggtgg tcttcaacag caaggagcaa ggctcctggg 240
 gccgcgagga gcgcggggcc ggcgttcctt tccagcgcg gcagcccttc gaggtgctca 300
 tcatcgcgtc agacgacggc ttcaaggccg tgggtgggga cccccagtac caccacttcc 360
 gccaccgcct gccgctggcg cgcgtgcgcc tgggtggaggt gggcggggac gtgcagctgg 420
 actccgtgag gatcttctga gcagaagccc aggcggcccc gggccttggc tggcaaataa 480
 agcgttagcc cgcagcgc 498

<210> 31
 <211> 4738
 <212> DNA
 <213> Homo sapiens

<400> 31
 taggattaaa gaaagtgcag taaagagaaa gcatgaagac accatcacia acagattccc 60
 acaactccat gctgtgtgct gcaggctggc cctgaaccca gatctctggc tgagaggatg 120
 ggggcagatg gggaaacagt gggttctgaag aacatgctca ttggcgctca cctgatcctt 180
 ctgggctcca tgatcaagcc ttcagagtgt cagctggagg tcaccacaga aagggtccag 240
 agacagtcag tggaggagga gggaggcatt gccaaactaca acacgtccag caaagagcag 300
 cctgtggtct tcaaccacgt gtacaacatt aacgtgcctt tggacaacct ctgctcctca 360
 gggctagagg cctctgctga gcaggaggtg agtgcagaag acgagactct ggagagctac 420
 atgggcccaga cctcagacca cgagagccag gttaccttta cacacaggat caacttcccc 480
 aaaaaggcct gtccatgtgc cagttcagcc cagggtgctgc aggagctgct gagccggatc 540
 gagatgctgg agagggaggt gtcgggtgctg cgagaccagt gcaacgcaa ctgctgcaa 600
 gaaagtgctg ccacaggaca actggactat atccctcact gcagcggcca cggcaacttt 660
 agctttgagt cctgtggctg catctgcaac gaaggctggc ttggcaagaa ttgctcggag 720
 ccctactgcc cgctgggttg ctccagccgg ggggtgtgtg tggatggcca gtgcatctgt 780
 gacagcgagt acagcgggga tgactgttcc gaactccggt gcccaacaga ctgcagctcc 840
 cgggggctct gcgtggacgg tgagtgtgtc tgtgaagagc cctacactgg cgaggactgc 900
 agggaaactga ggtgccctgg ggactgttcg gggaagggga gatgtgcaa cggtacctgt 960

ttatgcgagg	agggctacgt	tggtagaggac	tgcggccagc	ggcagtgctc	gaatgcctgc	1020
agtgggagag	gacaatgtga	ggaggggctc	tgcgtctgtg	aagagggcta	ccagggccct	1080
gactgctcag	cagttgcccc	tccagaggac	ttgcgagtgg	ctggtatcag	cgacagggtcc	1140
attgagctgg	aatgggacgg	gccgatggca	gtgacggaat	atgtgatctc	ttaccagccg	1200
acggccctgg	ggggcctcca	gtccagcag	cgggtgcctg	gagattggag	tgggtgtcacc	1260
atcacggagc	tggagccagg	tctcacctac	aacatcagcg	tctacgctgt	cattagcaac	1320
atcctcagcc	ttcccatcac	tgccaagggtg	gccacccatc	tctccactcc	tcaagggcta	1380
caatttaaga	cgatcacaga	gaccaccgtg	gaggtgcagt	gggagccctt	ctcattttcc	1440
ttcgatgggt	gggaaatcag	cttcattcca	aagaacaatg	aagggggagt	gattgctcag	1500
gtccccagcg	atgttacgtc	ctttaaccag	acaggactaa	agcctgggga	ggaatacatt	1560
gtcaatgtgg	tggctctgaa	agaacaggcc	cgcagccccc	ctacctgggc	cagcgtctcc	1620
acagtcattg	acggccccac	gcagatcctg	gttcgcatg	tctcggacac	cgtggctttt	1680
gtggagtggg	ttccccctcg	agccaaagtc	gatttcattc	ttttgaaata	tggcctgggtg	1740
ggcggggaag	gtgggaggac	caccttccgg	ctgcagcctc	ccctgagcca	atactcagtg	1800
caggccctgc	ggcctggctc	ccgatacgag	gtgtcagtca	gtgccgtccg	agggaccaac	1860
gagagcgatt	ctgccaccac	tcagttcaca	acagagatcg	atgcccccaa	gaacttgcca	1920
gttggttctc	gcacagcaac	cagccttgac	ctcgagtggg	ataacagtga	agccgaagtt	1980
caggagtaca	aggttggtga	catcacctcg	gcgggtgagc	aatatcatga	ggtactggtc	2040
cccaggggca	ttggtccaac	caccagggcc	accctgacag	atctggtacc	tggcactgag	2100
tatggagtgg	gaatatctgc	cgatcatgaac	tcacagcaaa	gcgtgccagc	caccatgaat	2160
gccaggactg	aacttgacag	tccccgagac	ctcatggtga	cagcctcctc	ggagacctcc	2220
atctccctca	tctggaccaa	ggccagtggc	cccattgacc	actaccgaat	tacctttacc	2280
ccatcctctg	ggattgcctc	agaagtcacc	gtaccaaggg	acaggacctc	atacacacta	2340
acagatctag	agcctggggc	agagtacatc	atttccgtca	ctgctgagag	gggtcggcag	2400
cagagcttgg	agtccactgt	ggatgctttc	acaggcttcc	gtcccatctc	tcatctgcac	2460
ttttctcatg	tgacctcctc	cagtgtgaac	atcacttgga	gtgatccatc	tccccagca	2520
gacagactca	ttcttaacta	cagccccagg	gatgaggagg	aagagatgat	ggaggtctcc	2580
ctggatgccg	ccaagaggca	tgctgtcctg	atgggcctgc	aaccagccac	agagtatatt	2640
gtgaaccttg	tggctgtcca	tggcacagtg	acctctgagc	ccattgtggg	ctccatcacc	2700

acaggaattg atcccccaaa agacatcaca attagcaatg tgaccaagga ctcagtgatg	2760
gtctcctgga gccctcctgt tgcattcttct gattactacc gagtatcata tcgacccacc	2820
caagtgggac gactagacag ctcagtgggtg cccaacactg tgacagaatt caccatcacc	2880
agactgaacc cagctaccga atacgaaatc agcctcaaca gcgtgcgggg cagggaggaa	2940
agcgagcgca tctgtactct tgtgcacaca gccatggaca accctgtgga tctgattgct	3000
accaatatca ctccaacaga agccctgctg cagtgggaagg caccagtggg tgaggtggag	3060
aactacgtca ttgttcttac aacttttgca gtcgctggag agaccatcct tgttgacgga	3120
gtcagtgagg aatttcgggt tgttgacctg ctctctagca ccactatac tgccaccatg	3180
tatgccacca atggacctct caccagtggc accatcagca ccaacttttc tactctcctg	3240
gacctccgg caaacctgac agccagtga gtcaccagac aaagtgccct gatctcctgg	3300
cagcctccca gggcagagat tgaaaattat gtcttgacct acaaatccac cgacggaagc	3360
cgcaaggagc tgattgtgga tgcagaagac acctggattc gactggaggg cctgttgagg	3420
aacacagact acacggtgct cctgcaggca gcacaggaca ccacgtggag cagcatcacc	3480
tccaccgctt tcaccacagg aggccgggtg ttccctcatc cccaagactg tgcccagcat	3540
ttgatgaatg gagacacttt gagtgggggt taccctatct tcctcaatgg ggagctgagc	3600
cagaaattac aagtgtactg tgatatgacc accgacgggg gcggctggat tgtattccag	3660
aggcggcaga atggccaaac tgattttttc cggaaatggg ctgattaccg tgttggtctc	3720
gggaacgtgg aggatgagtt ctggctgggg ctggacaata tacacaggat cacatcccag	3780
ggccgctatg agctgcgcgt ggacatgcgg gatggccagg aggccgcctt cgcctcctac	3840
gacaggttct ctgtcgagga cagcagaaac ctgtacaaac tccgcatagg aagctacaac	3900
ggcactgcgg gggactccct cagctatcat caaggacgcc ctttctccac agaggataga	3960
gacaatgatg ttgcagtgac taactgtgcc atgtcgtaca agggagcatg gtgtataag	4020
aactgccacc ggaccaacct caatgggaag tacggggagt ccaggcacag tcagggcac	4080
aactggtacc attggaaagg ccatgagttc tccatccctt ttgtggaaat gaagatgcgc	4140
ccctacaacc accgtctcat ggcagggaga aaacggcagt ccttacagtt ctgagcagtg	4200
ggcggctgca agccaaccaa tattttctgt catttggttg tattttataa tatgaaacaa	4260
ggggggaggg taatagcaat gtgttttgca acatattaag agtatgtgga ggaagcaggg	4320
atgtcgcagg aatccgctgg ctaacatctg ctcttggttt ctgctgccct ggagcctgac	4380
cctcagtcct cattctccct cctaccagg cctcctcaac cttcacctcc tttccacca	4440

aggaggagaa	gtaggaagtt	ttcttaaagg	gccaatcaaa	agccaagtcg	tggggtgcag	4500
attgttatgg	tgacaggcac	acacatTTTT	ctacccttct	tctgagatgt	cctctgcctt	4560
ccaggtatTT	gtgattttgt	cacagcctga	catggccagg	ttctcacact	ggcccagaga	4620
aaagagcctc	agcaagagag	ttttgccaac	aattcccctt	aaaaggaaaac	agatcaacta	4680
caccgcatcc	caacaaccca	ggttcttttc	cttccttctc	tccttctctc	cttccttc	4738

<210> 32

<211> 2072

<212> DNA

<213> Homo sapiens

<400> 32

gggcagtcgt	aggagactct	gaaaaagcaa	ataaatcaat	gttaaatacag	aaatgtgaat	60
gtagtaaggg	gctgaagaga	caggggaaga	gaatacatgg	gaaaatattg	aaaaggacag	120
agtgatcaaa	aaaagcaggg	acatgggagc	attgggcagc	acactgggag	ccattttactt	180
tatgctctta	ttgtatgatt	gagaaaaaaa	atgtccttag	tggttaagtg	gcttttcaat	240
gccacatcag	acttggtcca	tagcagttga	attaggggaa	ggtgaataag	ttggaggttg	300
gtgacaagga	gagaagctgg	aacagagagg	agagtcagaa	ccagagggaa	atgagagact	360
gagtaggcat	ctcagggttt	ttgaaggagt	ggattttctt	tgttgagtc	aggggaggtt	420
tgtctgttgg	ctgcagaaag	aagtcagaat	agagatatcg	tggggtaggt	ttgtttggaa	480
cagaaatcaa	agaccaatTT	ttctgagaga	aggaaataac	atctgcaaat	gatatgctgt	540
ttttgctact	tccattgtta	gctgttctcc	caggtgatgg	caatgcagac	gggctcaagg	600
agcctctctc	cttccatgtc	atctggatcg	catcctttta	caaccattcc	tggaaacaaa	660
atctgggtctc	aggttggctg	agtgatttgc	agactcatac	ctgggacagc	aattccagca	720
ccatcgTTTT	cctgtggccc	tgggccaggg	gaaacttcag	caatgaggag	tggaaggaaac	780
tggaaacatt	attccgtata	cgcaccattc	ggtcatttga	gggaattcgt	agatacgccc	840
atgaattgca	gtttgaatat	ccttttgaga	tacaggtgac	aggaggctgt	gagctgcact	900
ctggaaaggt	ctcaggaagc	ttcttgagct	tagcttatca	aggatcagac	tttgtgagct	960
tccagaacaa	ttcatgggtg	ccatatccag	tggctgggaa	tatggccaag	catttctgca	1020
aagtgtctcaa	tcagaatcag	catgaaaatg	acataacaca	caatcttctc	agtgacacct	1080
gcccacgttt	catcttgggt	cttcttgatg	caggaaaggc	acatctccag	cggcaagtga	1140
agcccagggc	ctggctgtcc	catggcccca	gtcctggccc	tggccatctg	cagcttgtgt	1200
gccatgtctc	aggattctac	ccaaagcccg	tgtgggtgat	gtggatgcgg	ggtgagcagg	1260

```

agcagcaggg cactcagcga ggggacatct tgcccagtgc tgatgggaca tggatatctcc 1320
gcgcaaccct ggaggtggcc gctggggagg cagctgacct gtcctgtcgg gtgaagcaca 1380
gcagtctaga gggccaggac atcgctctct actgggagca tcacagttcc gtgggcttca 1440
tcatcttggc ggtgatagtg cctttacttc ttctgatagg tcttgcgctt tggttcagga 1500
aacgctgttt ctgttaagac acaccatgag cctcctcgtc acccttctcc ttttggggtg 1560
agagaccagc agcccaaggg ctccagacac acctgaacac atcgtgatga tgacgtcctc 1620
tcaactctct ttgtaaaaat tttgttattt ttgcttgttt ctgattaatg attgtttgtc 1680
aatataagct caatttaatt ttgcaggatt tgttgttctg acctgggttc tgggactttt 1740
aaattcaaat tttatctcca gatggaatgg ggtcctagca acctccacat gttcacctat 1800
taatggatca tcaggcctgt tttagatata ccttactcca gagggccttc cctgacttac 1860
aagtgggaag cagtctcttc ctggtctgaa ctcccgcac attttagccg tactttgcta 1920
actgtgctcc tcacttcctc ttcttcattg cagttattta gatccccctc ttccttctaa 1980
tttttcagct ccttcaatgc aaagtacatg tatttttaat atatgcatcc ctggtgaagg 2040
atcttgcttg catgaaacat gttctcaata aa 2072

```

<210> 33

<211> 1854

<212> DNA

<213> Homo sapiens

<400> 33

```

gagaaggctt caatggattc tcttgtggtc cttgtgctct gtctctcatg tttgcttctc 60
ctttcactct ggagacagag ctctgggaga ggaaaactcc ctctggccc cactcctctc 120
ccagtgattg gaaatatacct acagataggt attaaggaca tcagcaaata cttaaccaat 180
ctctcaaagg tctatggccc tgtgttcact ctgtattttg gcctgaaacc catagtgggtg 240
ctgcatggat atgaagcagt gaagggaagcc ctgattgata ttggagagga gttttctgga 300
agaggcattt tcccactggc tgaaagagct aacagaggat ttggaattgt tttcagcaat 360
ggaaagaaat ggaaggagat ccggcgtttc tccctcatga cgctgcggaa ttttgggatg 420
gggaagagga gcattgagga ccgtgttcaa gaggaagccc gctgccttgt ggaggagtgt 480
agaaaaacca aggcctcacc ctgtgatccc actttcatcc tgggctgtgc tccctgcaat 540
gtgatctgct ccattatttt ccataaacgt tttgattata aagatcagca atttcttaac 600
ttaatggaaa agttgaatga aaacatcaag attttgagca gccctggat ccagatctgc 660

```

aataatTTTT	ctcctatcat	tgattacttc	cggggaactc	acaacaaatt	acttaaaaac	720
gttgctTTTta	tgaaaagtta	tatttttgaa	aaagtaaaag	aacaccaaga	atcaatggac	780
atgaacaacc	ctcaggactt	tattgattgc	ttcctgatga	aaatggagaa	ggaaaagcac	840
aaccaaccat	ctgaatttac	tattgaaagc	ttggaaaaca	ctgcagttga	cttgtttgga	900
gctgggacag	agacgacaag	cacaacctg	agatatgctc	tccttctcct	gctgaagcac	960
ccagaggtca	cagctaaagt	ccaggaagag	attgaacgtg	tgattggcag	aaaccggagc	1020
ccctgcatgc	aagacaggag	ccacatgccc	tacacagatg	ctgtggtgca	cgaggtccag	1080
agataccttg	accttctccc	caccagcctg	ccccatgcag	tgacctgtga	cattaaattc	1140
agaaactatc	tcattcccaa	gggcacaacc	atattaattt	ccctgacttc	tgtgctacat	1200
gacaacaaag	aatttcccaa	cccagagatg	tttgaccctc	atcactttct	ggatgaaggt	1260
ggcaatTTTta	agaaaagtaa	atacttcatg	cctttctcag	caggaaaacg	gatttgtgtg	1320
ggagaagccc	tggccggcat	ggagctgttt	ttattcctga	cctccatttt	acagaacttt	1380
aacctgaaat	ctctggttga	cccaaagaac	cttgacacca	ctccagttgt	caatggTTTT	1440
gcctctgtgc	cgcccttcta	ccagctgtgc	ttcattcctg	tctgaagaag	agcagatggc	1500
ctggctgctg	ctgtgcagtc	cctgcagctc	tctttcctct	ggggcattat	ccatctttca	1560
ctatctgtaa	tgccttttct	cacctgtcat	ctcacatttt	cccttccttg	aagatctagt	1620
gaacattcga	ccttcattac	ggagagtTtc	ctatgtttca	ctgtgcaaatt	atatctgcta	1680
ttctccatac	tctgtaacag	ttgcattgac	tgtcacataa	tgctcatact	tatctaattg	1740
tgagttatta	atatgttatt	attaaataga	gaaatatgat	ttgtgtatta	taattcaaag	1800
gcatttcttt	tctgcatgtt	ctaaataaaa	agcattatta	tttgctgaaa	aaaa	1854

<210> 34

<211> 1561

<212> DNA

<213> Homo sapiens

<400> 34

cgcacgccac	ccgcccgcg	cctgccagag	ctgctcggcc	cgcagccagg	gggacagcgg	60
ctggctcggag	gctcgcagtg	ctgtcggcga	gaagcagtcg	ggtttgagac	gcttgggctg	120
cgttgggtgcg	cgggtggacac	gagggacccc	agttcccgcg	agcagctccg	cgccggccct	180
gagagactaa	gctgaaactg	ctgctcagct	cccaagatgg	tgccacccaa	attgcatgtg	240
cttttctgcc	tctgcggctg	cctggctgtg	gtttatcctt	ttgactggca	atacataaat	300
cctgttgccc	atatgaaatc	atcagcatgg	gtcaacaaaa	tacaagtact	gatggctgct	360

```

gcaagctttg gccaaactaa aatcccccg ggaatgggc cttattccgt tggttgtaca 420
gacttaatgt ttgatcacac taataagggc accttcttgc gtttatatta tccatcccaa 480
gataatgac gccttgacac cctttggatc ccaaataaag aatatttttg gggcttagc 540
aaatttcttg gaacacactg gcttatgggc aacattttga gggtactctt tggttcaatg 600
acaactcctg caaactggaa ttccccctctg aggcttggg aaaaatatcc acttggtggt 660
ttttctcatg gtcttggggc attcaggaca ctttattctg ctattggcat tgacctggca 720
tctcatgggt ttatagttgc tgctgtagaa cacagagata gatctgcac tgcaacttac 780
tatttcaagg accaatctgc tgcagaaata ggggacaagt cttggctcta ccttagaacc 840
ctgaaacaag aggaggagac acatatacga aatgagcagg tacggcaaag agcaaaagaa 900
tgttcccaag ctctcagtct gattcttgac attgatcatg gaaagccagt gaagaatgca 960
ttagatttaa agtttgatat ggaacaactg aaggactcta ttgatagga aaaaatagca 1020
gtaattggac attcttttgg tggagcaacg gttattcaga ctcttagtga agatcagaga 1080
ttcagatgtg gtattgccct ggatgcatgg atgtttccac tgggtgatga agtatattcc 1140
agaattcctc agccccctctt ttttatcaac tctgaatatt tccaatatcc tgctaataac 1200
ataaaaatga aaaaatgcta ctcacctgat aaagaaagaa agatgattac aatcaggggt 1260
tcagtccacc agaattttgc tgacttcaact tttgcaactg gcaaaataat tggacacatg 1320
ctcaaattaa agggagacat agattcaaat gcagctattg atcttagcaa caaagcttca 1380
ttagcattct tacaaaagca tttaggactt cataaagatt ttgatcagtg ggactgcttg 1440
attgaaggag atgatgagaa tcttattcca gggaccaaca ttaacacaac caatcaacac 1500
atcatgttac agaactcttc aggaatagag aaatacaatt aggattaaaa taggtttttt 1560
a 1561

```

<210> 35

<211> 398

<212> DNA

<213> Homo sapiens

<220>

<221> modified_base

<222> (30)..(30)

<223> a, c, t, g, unknown or other

<220>

<221> modified_base

<222> (37)..(37)

<223> a, c, t, g, unknown or other

<220>
<221> modified_base
<222> (58)..(59)
<223> a, c, t, g, unknown or other

<220>
<221> modified_base
<222> (81)..(81)
<223> a, c, t, g, unknown or other

<220>
<221> modified_base
<222> (84)..(84)
<223> a, c, t, g, unknown or other

<220>
<221> modified_base
<222> (87)..(87)
<223> a, c, t, g, unknown or other

<220>
<221> modified_base
<222> (117)..(117)
<223> a, c, t, g, unknown or other

<220>
<221> modified_base
<222> (163)..(163)
<223> a, c, t, g, unknown or other

<220>
<221> modified_base
<222> (180)..(180)
<223> a, c, t, g, unknown or other

<220>
<221> modified_base
<222> (185)..(185)
<223> a, c, t, g, unknown or other

<220>
<221> modified_base
<222> (198)..(198)
<223> a, c, t, g, unknown or other

<220>
<221> modified_base
<222> (212)..(212)
<223> a, c, t, g, unknown or other

<220>
<221> modified_base
<222> (224)..(224)
<223> a, c, t, g, unknown or other

<220>
<221> modified_base

<222> (230)..(231)
<223> a, c, t, g, unknown or other

<220>
<221> modified_base
<222> (233)..(233)
<223> a, c, t, g, unknown or other

<220>
<221> modified_base
<222> (235)..(236)
<223> a, c, t, g, unknown or other

<220>
<221> modified_base
<222> (238)..(238)
<223> a, c, t, g, unknown or other

<220>
<221> modified_base
<222> (246)..(246)
<223> a, c, t, g, unknown or other

<220>
<221> modified_base
<222> (259)..(259)
<223> a, c, t, g, unknown or other

<220>
<221> modified_base
<222> (262)..(262)
<223> a, c, t, g, unknown or other

<220>
<221> modified_base
<222> (270)..(270)
<223> a, c, t, g, unknown or other

<220>
<221> modified_base
<222> (282)..(283)
<223> a, c, t, g, unknown or other

<220>
<221> modified_base
<222> (294)..(294)
<223> a, c, t, g, unknown or other

<220>
<221> modified_base
<222> (306)..(306)
<223> a, c, t, g, unknown or other

<220>
<221> modified_base
<222> (308)..(309)
<223> a, c, t, g, unknown or other

<220>
 <221> modified_base
 <222> (311)..(311)
 <223> a, c, t, g, unknown or other

<220>
 <221> modified_base
 <222> (315)..(315)
 <223> a, c, t, g, unknown or other

<220>
 <221> modified_base
 <222> (323)..(323)
 <223> a, c, t, g, unknown or other

<220>
 <221> modified_base
 <222> (326)..(326)
 <223> a, c, t, g, unknown or other

<220>
 <221> modified_base
 <222> (330)..(330)
 <223> a, c, t, g, unknown or other

<220>
 <221> modified_base
 <222> (336)..(336)
 <223> a, c, t, g, unknown or other

<220>
 <221> modified_base
 <222> (343)..(343)
 <223> a, c, t, g, unknown or other

<220>
 <221> modified_base
 <222> (348)..(349)
 <223> a, c, t, g, unknown or other

<220>
 <221> modified_base
 <222> (360)..(360)
 <223> a, c, t, g, unknown or other

<220>
 <221> modified_base
 <222> (380)..(380)
 <223> a, c, t, g, unknown or other

<400> 35
 aaatggggga tacatacttt aagaattttn aaaaatntac atggaaaaac accaggannc 60
 tatagaaaat aaaacagcat naantancat tatttataaa atagatacta gcaaatnacc 120
 ttacgtaaag atccaagtca gtaacttaaa ggatcttaca tanaaggact gcccgctggn 180
 tggangggga ggatcccn gc tgtacactgg gngccaaagc cctngtagtn ntntnnct 240

gaaaanctct aactcaggnt tnatctcatn cccaccggga anntgcccac ccnngcccct 300
 tttggngnng ncggnnttcac ccncanacan gccttnatcc gantcccnnc gggccctcgn 360
 agggggggggg ggccccgggn gcccccaacc cccgcccc 398

<210> 36

<211> 5635

<212> DNA

<213> Homo sapiens

<400> 36

gcggccgaag aaaaacagga caaagaaacc tgtgtgaatt ttcagctttt caccttctct 60
 gatattatatt cttcctcact cttcctttga cagtccctgc agtcgcctg agagagtaga 120
 gaagaccccc tcccagaacc ttctgtgaag gtctccccgc tgacttcctg tagtggaatg 180
 gactgtgtgc caggtgcctg ccgaagaccc ctgtcactga ctgtgccctt tgggaaagag 240
 tcaacaatgg cctcctccta tggtgactt cgttcatgtt caggctctcc agcttgctag 300
 tgagaattgc caaggattgg ttcatggcag gatagaacta aactgataga tgaaagctcc 360
 acagtgcctc aagacggggt cccgttcatg ttaagcagtt ttccttcctt caaaataaaa 420
 aactagcagt ccttagggag gacagttttt tccttccttt tcctattctg gctccaacag 480
 ctgtctcaac acagcccag atggggagca gcctggcttc caccggcaat agctgtattg 540
 tgggagtgtg aaagagaagc caccttttcc tcctctgccc caagccacct ggcccccttg 600
 tcctttctcc tcctcgtcct ctgaggttga atgcctttga gaacttgatg cataaaat 660
 gcatgactcc tactccttt ctggatctcc cattggactc aagccagcat ggctcacacc 720
 acaaaggtta acggcagtgc ctcaaggaaa gcaggtgata ttctcagtgg agaccaggac 780
 aaggaacaga aagaccctta ctttgtggag accccctatg gttatcaact agacttagat 840
 ttcctcaaat atgtggatga catacagaag ggaaatacca tcaaaagact gaacatccag 900
 aagaggcgga agccgtccgt gccatgccc gaaccagga ccacatctgg tcagcaagg 960
 atatggactt ccactgaatc cctctcatcc tccaacagt atgacaacaa gcagtgcccc 1020
 aacttcctca tagccagaag tcaagttaca tcaactcaa tctcaaagcc acctccccct 1080
 ctggagacct cactcccttt tcttaccatc ccagaaaatc gacagctgcc acctccctca 1140
 ccacaactcc caaagcataa ccttcatgtc accaagacac tgatggagac ccggagaaga 1200
 ctggaacagg agagagccac catgcagatg acaccgggtg agttcagaag gccaggctg 1260
 gccagttttg gaggcattgg caccacaagc tccttcctt cttttgtggg ttctggaaac 1320

cacaatcctg	ccaagcacca	gcttcagaat	ggataccaag	gtaatgggga	ttatggtagc	1380
tatgccccag	ctgctccac	cacttcctcc	atggggagct	ccatccgcca	cagccccctg	1440
agctcagggg	tctccacccc	agtgaccaac	gtgagcccca	tgcacctgca	gcacatccgc	1500
gagcagatgg	ccattgctct	gaaacgcctg	aaggagctgg	aggagcaggt	gcgaaccatc	1560
cctgtgctcc	aggtaaagat	ctctgtcttg	caagaagaga	aaaggcagtt	ggtctcacag	1620
ctgaaaaacc	aaagggctgc	atcccagatc	aatgtctgtg	gtgtgaggaa	gcggtcctat	1680
agtgcgggga	acgcctccca	gctggaacag	ctctcccgga	cccgaagaag	tggcggggaa	1740
ttatacattg	actatgagga	ggaagaaatg	gagaccgtag	aacagagcac	gcagaggata	1800
aaggagttcc	ggcaacttac	agcagacatg	caagccctgg	agcagaagat	ccaggacagc	1860
agctgtgagg	cctcctcaga	gctcagggag	aatggagagt	gccggtctgt	ggctgtgggt	1920
gccgaggaga	acatgaacga	catcgctcgtg	taccacagag	gctccaggtc	ctgtaaggat	1980
gcagctgtag	ggacacttgt	tgagatgaga	aattgtgggg	tcagcgtgac	agaggccatg	2040
cttgagtgta	tgactgaagc	tgacaaagaa	attgagctcc	aacagcagac	catagaagcc	2100
ttgaagggaa	agatctatcg	cctagaagta	cagcttagag	aaaccaccca	tgaccgggag	2160
atgactaaac	tgaacaaga	gctgcaggct	gctggatcga	ggaaaaaggt	tgacaaagcc	2220
acgatggccc	agccgcttgt	tttcagtaag	gtggtggagg	cagtgggtgca	gaccagagac	2280
caaatggtcg	gcagtcacat	ggacctggtg	gacacgtgtg	ttgggacctc	cgtggaaaca	2340
aacagtgtag	gcctctcctg	ccagcctgaa	tgtaagaata	aagtcgtagg	gcctgagctg	2400
cctatgaatt	ggtggattgt	taaggagagg	gtggaaatgc	atgaccgatg	tgctgggagg	2460
tctgtggaaa	tgtgtgacaa	gagtgtgagt	gtggaagtca	gcgtctgcca	aacaggcagc	2520
aacacagagg	agtctgtgaa	cgacctcaca	ctcctcaaga	caaacttgaa	tctcaaagaa	2580
gtgcggtcta	tcggttgtgg	agattgttct	gttgacgtga	ccgtctgctc	tccaaaggag	2640
tgccctccc	ggggcgtaga	cactgaggct	gttagccagg	tggaagctgc	cgtcatggca	2700
gtgcctcgta	ctgcagacca	ggacactagc	acagatttgg	aacagggtgca	ccagttcacc	2760
aacaccgaga	cggccaccct	catagagtcc	tgcaccaaca	cttgtctaag	cactttggac	2820
aagcagacca	gcaccagac	tgtggagacg	cggacagtag	ctgtaggaga	aggccgtgtc	2880
aaggacatca	actcctccac	caagacgcgg	tccattgggtg	ttggaacggt	gctttctggc	2940
cattctgggt	ttgacaggcc	atcagctgtg	aagaccaaag	agtcagggtg	ggggcagata	3000
aatattaacg	acaactatct	ggttggtctc	aaaatgagga	ctatagcttg	tgggccacca	3060

cagttgactg	tggggctgac	agccagcaga	aggagcgtgg	ggggtgggga	tgaccctgta	3120
ggggaatctc	tggagaacc	ccagcctcaa	gctccacttg	gaatgatgac	tggcctggat	3180
cactacattg	agcgtatcca	gaagctgctg	gcagaacagc	agacactgct	ggctgagaac	3240
tacagtgaac	tggcagaagc	tttcggggaa	cctcactcac	agatgggctc	cctcaactct	3300
cagctcatca	gcaccctgtc	gtctatcaac	tctgtcatga	aatctgcaag	cactgaagag	3360
ctgaggaacc	ctgacttcca	gaaaaccagt	ctgggtaaaa	tcacaggcaa	ttatttggga	3420
tatacctgta	agtgtggggg	ccttcagtca	ggaagtccct	taagctccca	gacatcccag	3480
cctgagcaag	aagtggggac	ctcagaagga	aagccaatca	gcagcctgga	tgccctcccc	3540
actcaggaag	gtacgctgtc	tccagtgaac	ctgacagacg	accagatcgc	cgctggcctc	3600
tatgcatgta	caaacaatga	aagtacactg	aagtccatca	tgaagaagaa	agatggtaac	3660
aaagattcaa	atggcgcaaa	aaagaatctt	cagtttggtg	gcattaatgg	agggtatgaa	3720
acaacttcaa	gtgatgattc	cagctcagat	gaaagctctt	cttccgagtc	agatgacgag	3780
tgtgatgtca	ttgagtatcc	tcttgaagaa	gaggaggagg	aggaggatga	agacactcgg	3840
ggaatggcag	aagggcacca	tgcagttaat	attgaagggt	tgaagtctgc	cagggtgga	3900
gatgaaatgc	aggttcaaga	atgtgaacct	gagaagggtg	aaatcagaga	gaggtatgaa	3960
ttaagtga	agatgttgtc	tgcatgcaac	ttactgaaaa	atactataaa	tgaccccaaa	4020
gctttgacca	gcaaagatat	gaggttctgt	ctgaacaccc	tccagcacga	gtggttccgc	4080
gtgtccagtc	agaagtcagc	cattccagcc	atggtggggg	actacatagc	tgcttttgag	4140
gccatttccc	cagatgtcct	ccgctatgtc	atcaacttgg	cagacggcaa	cggcaacaca	4200
gccctccatt	acagcgtgtc	ccactccaac	ttcgagattg	tgaagctgct	gttagatgcc	4260
gatgtgtgta	atgtggatca	ccagaacaag	gcaggctaca	cccccatcat	gttggcggcc	4320
ctcgccgctg	tgggaagcaga	gaaggacatg	cggattgtgg	aagaactctt	tggctgtggg	4380
gatgtgaatg	ccaaagctag	tcaggcgggg	cagacggccc	tcatgctggc	ggtcagtcac	4440
ggacggatag	acatggtgaa	gggccttctg	gcctgtgggg	ctgatgtcaa	catccaggat	4500
gacgagggtc	ccacggccct	catgtgtgcc	agcgagcacg	ggcacgtgga	gattgtcaag	4560
ctgctgctgg	cccagcccgg	ctgcaacggt	cacctagagg	acaacgatgg	cagcactgcg	4620
ctctcaatcg	ccctggaagc	aggacacaag	gacatcgctg	ttcttctgta	tgcccatgtc	4680
aactttgcaa	aagcccagtc	tccgggcacc	cctaggcttg	gaaggaagac	gtctcctggc	4740
cccacccacc	gaggttcatt	tgattgattg	tatgcaaata	gccctttatt	tacatgccac	4800

tattaagctg	ctaattgttc	ctggtggggt	gacagatact	gaatgtatac	gtattgtgcc	4860
tgagctcacc	agcaaacaga	agcatcaagc	ccaggggtaa	aggctgaagc	tttcacagtg	4920
cagagactgc	tagcctgggc	acacgcacct	cctttctggc	cgtcttctgt	gtagggcaca	4980
ctttaaccca	gtctctgttg	ctggtgagtc	tctgctccgt	tttgtacagt	cacaggggaat	5040
tctgatctga	aggggcacct	tctgttcact	cccacaaagt	gggtgtctggt	tctcactgag	5100
acgttttaag	atTTTTccac	aaatatTTat	atgtactaaa	tgtggaacca	ttagaaagtt	5160
cttccaaaat	ctcattccag	catagTTTTg	gattTTTTctt	ttgtcttatt	ttaaaaataag	5220
gaagtcgaga	tgactttgat	cattggtaac	ttgggcctgg	gccagacaaa	gtataaaaact	5280
tacaaaagaa	tattctcatt	tggctcttaac	taggtagatg	taatatatga	ctttttataa	5340
aaagggatc	tatatgaact	tgacacagta	ttttcagctt	ttgtattcca	tactaaagcc	5400
atgaagaact	acacgtaaca	tcatcatttg	tattaattgc	acaactccaa	tgctaaaggt	5460
tggatttgt	tagaggaatc	ggctctgtat	ttgcctctag	agaaacacag	tgttctcttt	5520
gtatttatgg	attccttttt	accgtgtcac	atttactttg	gtcctctatg	tatttaaatg	5580
tttgaagtgc	cttagactct	tgccatattt	tcaaaataaa	attccattaa	gctct	5635

<210> 37

<211> 2856

<212> DNA

<213> Homo sapiens

<400> 37

cattcagaga	cagaaggtgg	atagacaaat	ctccaccttc	agactggtag	gctcctccag	60
aagccatcag	acaggaagat	gtgaaaatcc	ccagcactca	tcccagaatc	actaagtggc	120
acctgtcctg	ggccaaagtc	ccaggacaga	cctcattggt	cctctgtggg	aatacctccc	180
caggagggca	tcttggattt	cccccttgca	accaggtca	gaagtttcat	cgtaaggtt	240
gtttcatctt	ttttttcctg	tctaacagct	ctgaactacca	cccaaccttg	aggcacagtg	300
aagacatcgg	tggccactcc	aataacagca	ggtcacagct	gctcttctgg	aggtgtccta	360
caggtgaaaa	gccagcgac	ccagtcagga	tttaagttta	cctcaaaaat	ggaagatttt	420
aacatggaga	gtgacagctt	tgaagatttc	tggaaaggtg	aagatcttag	taattacagt	480
tacagctcta	ccctgcccc	ttttctacta	gatgccgccc	catgtgaacc	agaatccctg	540
gaaatcaaca	agtattttgt	ggtcattatc	tatgccctgg	tattcctgct	gagcctgctg	600
ggaaactccc	tctgtatgct	ggtcattctta	tacagcaggg	tgggccgctc	cgtaactgat	660
gtctacctgc	tgaacctagc	cttggccgac	ctactctttg	ccctgacctt	gcccatctgg	720

gccgcctcca	aggtgaatgg	ctggattttt	ggcacattcc	tgtgcaaggt	ggtctcactc	780
ctgaaggaag	tcaacttcta	tagtggcatc	ctgctactgg	cctgcatcag	tgtggaccgt	840
tacctggcca	ttgtccatgc	cacacgcaca	ctgacccaga	agcgctactt	ggtcaaattc	900
atatgtctca	gcatctgggg	tctgtccttg	ctcctggccc	tgcctgtctt	acttttccga	960
aggaccgtct	actcatccaa	tgtagccca	gcctgctatg	aggacatggg	caacaatata	1020
gcaaactggc	ggatgctgtt	acggatcctg	cccagtcct	ttggcttcat	cgtgccactg	1080
ctgatcatgc	tgttctgcta	cggattcacc	ctgcgtacgc	tgtttaaggc	ccacatgggg	1140
cagaagcacc	gggccatgcg	ggtcattctt	gctgtcgtcc	tcattcttct	gctctgctgg	1200
ctgccctaca	acctggtcct	gctggcagac	acctcatga	ggaccaggt	gatccaggag	1260
acctgtgagc	gccgcaatca	catcgaccgg	gctctggatg	ccaccgagat	tctgggcatc	1320
cttcacagct	gcctcaaccc	cctcatctac	gccttcattg	gccagaagtt	tcgccatgga	1380
ctcctcaaga	ttctagctat	acatggcttg	atcagcaagg	actccctgcc	caaagacagc	1440
aggccttctt	ttgttggtc	ttcttcaggg	cacacttcca	ctactctcta	agacctctg	1500
cctaagtgca	gcccgtgggg	ttcctccctt	ctcttcacag	tcacattcca	agcctcatgt	1560
ccactgggtc	ttcttggtct	cagtgtcaat	gcagccccc	ttgtggtcac	aggaagtaga	1620
ggaggccacg	ttcttactag	tttcccttgc	atggtttaga	aagcttgccc	tgggtgcctca	1680
ccccttgcca	taattactat	gtcatttgct	ggagctctgc	ccatcctgcc	cctgagccca	1740
tggcactcta	tgttctaaga	agtgaaaatc	tacactccag	tgagacagct	ctgcatactc	1800
attaggatgg	ctagtatcaa	aagaaagaaa	atcaggctgg	ccaacggggg	gaaacctgtc	1860
tctactaaaa	atacaaaaaa	aaaaaaaaat	tagccggggc	tgggtggtgag	tgctgttaat	1920
cacagctact	tgggaggctg	agatgggaga	atcacttgaa	cccgggagca	gaggttgcag	1980
tgagccgaga	ttgtgccctt	gccatccagc	ctgagcgaca	gtgagactct	gtctcagtcc	2040
atgaagatgt	agaggagaaa	ctggaactct	cgagcgttgc	tgggggggat	tgtaaaatgg	2100
tgtgaccact	gcagaagaca	gtatggcagc	tttctcaaaa	acttcagaca	tagaattaac	2160
acatgatcct	gcaattccac	ttataggaat	tgaccacaaa	gaaatgaaag	cagggacttg	2220
aacctatatt	tgtacaccaa	tattcatagc	agcttattca	caagacccaa	aaggcagaag	2280
caacccaaat	gttcatcaat	gaatgaatga	atggctaagc	aaaatgtgat	atgtacctaa	2340
cgaagtatcc	ttcagcctga	aagaggaatg	aagtactcat	acatgttaca	acacggacga	2400
accttgaaaa	ctttatgcta	agtgaataaa	gccagacatc	aacagataaa	tagtttatga	2460

ttccacctac atgaggtact gāgagtgaac aaattttacag agacagaaaag cagaacagtg	2520
attaccaggg actgagggga ggggagcatg ggaagtgacg gtttaatggg cacaggggttt	2580
atgttttagga tgttgaaaaa gttctgcaga taaacagtag tgatagttgt accgcaatgt	2640
gacttaatgc cactaaattg acacttaaaa atgggtttaaa tgggtcaattt tgttatgtat	2700
attttatatc aatttaaaaa aaaacctgag ccccaaaagg tatttttaatc accaaggctg	2760
attaaaccaa ggctagaacc acctgcctat attttttgtt aaatgatttc attcaatatc	2820
ttttttttaa taaaccattt ttacttgggt gtttat	2856

<210> 38

<211> 2961

<212> DNA

<213> Homo sapiens

<400> 38

aagagatgat ttctccatcc tgaacgtgca gcgagcttgt caggaagatc ggaggtgcc	60
agtagcagag aaagcatccc ccagctctga caggagaca gcacatgtct aaggcccaca	120
agccttgccc ctaccggagg agaagtcaat tttcttctcg aaaatacctg aaaaaagaaa	180
tgaattcctt ccagcaacag ccaccgccat tcggcacagt gccaccacaa atgatgtttc	240
ctccaaactg gcagggggca gagaaggacg ctgctttcct cgccaaggac ttcaactttc	300
tcactttgaa caatcagcca ccaccaggaa acaggagcca accaagggca atggggcccg	360
agaacaacct gtacagccag tacgagcaga aggtgcgccc ctgcattgac ctcatcgact	420
ccctgcgggc tctgggtgtg gagcaggacc tggccctgcc agccatcgcc gtcacgggg	480
accagagctc gggcaagagc tctgtgctgg aggcactgtc aggagtcgag cttcccagag	540
gcagcggaat cgtaaccagg tgtccgctgg tgctgaaact gaaaaagcag ccctgtgagg	600
catgggcccgg aaggatcagc taccggaaca ccgagctaga gcttcaggac cctggccagg	660
tggagaaaga gatacacaaa gcccagaacg tcatggccgg gaatggccgg ggcacagcc	720
atgagctcat cagcctggag atcacctccc ctgagggttc agacctgacc atcattgacc	780
ttcccggcat caccaggtg gctgtggaca accagccccg agacatcgga ctgcagatca	840
aggctctcat caagaagtac atccagaggc agcagacgat caacttggtg gtggttcct	900
gtaacgtgga cattgccacc acggaggcgc tgagcatggc ccatgaggtg gacccggaag	960
gggacaggac catcggtatc ctgaccaaac cagatctaata ggacaggggc actgagaaaa	1020
gcgtcatgaa tgtggtgcgg aacctcacgt accccctcaa gaagggtac atgattgtga	1080

agtgccgggg	ccagcaggag	atcacaaaca	ggctgagctt	ggcagaggca	accaagaaag	1140
aaattacatt	ctttcaaaca	catccatatt	tcagagttct	cctggaggag	gggtcagcca	1200
cggttccccg	actggcagaa	agacttacca	ctgaactcat	catgcatatc	caaaaaatcgc	1260
tcccgttggt	agaaggacaa	ataagggaga	gccaccagaa	ggcgaccgag	gagctgcggc	1320
gttgcggggc	tgacatcccc	agccaggagg	ccgacaagat	gttctttcta	attgagaaaa	1380
tcaagatggt	taatcaggac	atcgaaaagt	tagtagaagg	agaagaagtt	gtaagggaga	1440
atgagacccg	tttatacaac	aaaatcagag	aggattttta	aaactgggta	ggcatacttg	1500
caactaatac	ccaaaaagtt	aaaaatatta	tccacgaaga	agttgaaaaa	tatgaaaagc	1560
agtatcgagg	caaggagctt	ctgggatttg	tcaactacaa	gacatttgag	atcatcgtgc	1620
atcagtacat	ccagcagctg	gtggagcccc	cccttagcat	gctccagaaa	gccatggaaa	1680
ttatccagca	agctttcatt	aacgtggcca	aaaaacattt	tggcgaattt	ttcaacctta	1740
accaaactgt	tcagagcacg	attgaagaca	taaaagtga	acacacagca	aaggcagaaa	1800
acatgatcca	acttcagttc	agaatggagc	agatggtttt	ttgtcaagat	cagattttaca	1860
gtgttgttct	gaagaaagtc	cgagaagaga	tttttaaccc	tctggggacg	ccttcacaga	1920
atatgaagtt	gaactctcat	tttcccagta	atgagtcttc	ggtttcctcc	tttactgaaa	1980
taggcattcca	cctgaatgcc	tacttcttgg	aaaccagcaa	acgtctcgcc	aaccagatcc	2040
catttataat	tcagtatttt	atgctccgag	agaatgggtga	ctccttgagc	aaagccatga	2100
tgcagatact	acaggaaaaa	aatcgctatt	cctggctgct	tcaagagcag	agtgaagaccg	2160
ctaccaagag	aagaatcctt	aaggagagaa	tttaccggct	cactcaggcg	cgacacgcac	2220
tctgtcaatt	ctccagcaaa	gagatccact	gaagggcggc	gatgcctgtg	gttgttttct	2280
tgtgctgact	cattcattct	aaggggagtc	gggtgcaggat	gccgcttctg	ctttggggcc	2340
aaactcttct	gtcactatca	gtgtccatct	ctactgtact	ccctcagcat	cagagcatgc	2400
atcaggggtc	cacacaggct	cagctctctc	caccacccag	ctcttccttg	accttcacga	2460
agggatggct	ctccagtcct	tgggtcccgt	agcacacagt	tacagtgtcc	taagatactg	2520
ctatcattct	tcgctaattt	gtatttgtat	tcccttcccc	ctacaagatt	atgagacccc	2580
agagggggaa	ggctctgggtc	aaattcttct	tttgtatgtc	cagtctcctg	cacagcacct	2640
gcagcattgt	aactgcttaa	taaatgacat	ctcactgaac	gaatgagtg	tgtgtaagt	2700
atggagatac	ctgaggctat	tgctcaagcc	caggccttgg	acatttagtg	actgttagcc	2760
ggtecccttc	agatccagt	gccatgcccc	ctgcttcccc	tggttcactg	tcattgtgtt	2820

tcccagcctc tccactcccc cgccagaaag gagcctgagt gattctcttt tcttcttggt 2880
 tccctgatta tgatgagctt ccattgttct gttaagtctt gaagaggaat ttaataaagc 2940
 aaagaaactt tttaaaaacg t 2961

<210> 39

<211> 1192

<212> DNA

<213> Homo sapiens

<400> 39

ccagcccgaaggcagggtc tgggtgcggg aagagggctc ggagctgcct tcttctgcc 60
 ttggggccgc ccagatgagg gaacagcccg atttgcttg ttctgattct ccaggctgtc 120
 gtggttgtgg aatgcaaacg ccagcacata atggaaacag gacctgaaga cccttccagc 180
 atgccagagg aaagtcccc caggcggacc ccgcagagca ttcctacca ggacctcct 240
 cacctggtca atgcagacgg acagtacctc ttctgcaggt actggaaacc cacaggcaca 300
 cccaaggccc tcatctttgt gtcccatgga gccggagagc acagtggccg ctatgaagag 360
 ctggctcgga tgctgatggg gctggacctg ctgggtgttcg ccacgacca tgttgccac 420
 ggacagagcg aaggggagag gatggtagtg tctgacttcc acgttttcgt cagggatgtg 480
 ttgcagcatg tggattccat gcagaaagac taccctgggc ttcctgtctt ccttctgggc 540
 cactccatgg gaggcgccat cgccatctc acggccgcag agaggccggg ccacttcgcc 600
 ggcatggtac tcatttcgcc tctggttctt gccaatcctg aatctgcaac aactttcaag 660
 gtcttctgct cgaaagtgt caaccttgtg ctgccaaact tgtccctcgg gcccatcgac 720
 tccagcgtgc tctctcggaa taagacagag gtgcacattt ataactcaga cccctgatc 780
 tgccgggagc ggctgaaggt gtgcttcggc atccaactgc tgaatgccgt ctcacgggtg 840
 gagcgcgcc tcccaagct gactgtgccc ttctgtgtgc tccagggtc tgccgatcgc 900
 ctatgtgaca gcaaagggc ctacctgtc atggagttag ccaagagcca ggacaagact 960
 ctcaagattt atgaaggtgc ctacctgtt ctccacaagg agcttcctga agtcaccaac 1020
 tccgtcttcc atgaaataaa catgtgggtc tctcaaagga cagccacggc aggaactgcg 1080
 tccccacct gaatgcattg gccggtgccc ggctcatggt ctgggggatg caggcagggg 1140
 aagggcagag atggcttctc agatatggct tgcaaaaaaa aaaaaaaaaa aa 1192

<210> 40

<211> 223

<212> DNA

<213> Homo sapiens

<400> 40
gacctgggttc tccttgctga gttctctacc ttctgtcctg acttgcatgc tctccctctg 60
gaacctgaag ctgacccata atgcctggga gcatgagctc acccatacac ctccagccca 120
ccccagcac agctgagcac tggattatcc acagtcagga tttaagtta cctcaaaaat 180
ggaagatttt aacatggaga gtgacagctt tgaagatttc tgg 223

<210> 41
<211> 1746
<212> DNA
<213> Homo sapiens

<400> 41
tcactcaacc agagcttgct cccccctc cacgtggaga ttgaccctga gatccagaaa 60
gtccggacgg aagagcgga acagatcaag ctctcaaca acaagtttgc ctcttcatc 120
gacaaggtgc agttcttaga gcaacagaat aaggctctgg agaccaaatg gaacctgctc 180
cagcagcaga cgaccaccac ctccagcaaa aaccttgagc ccctctttga gacctacctc 240
agtgtcctga ggaagcagct agataccttg ggcaatgaca aagggcgcct gcagtctgag 300
ctgaagacca tgcaggacag cgtggaggac ttcaagacta agtatgaaga ggagatcaac 360
aaacgcacag cagccgagaa tgactttgtg gtcctaaaga aggacgtgga tgctgcctac 420
ctgaacaagg tggagttgga ggccaaggtg gacagtctta atgacgagat caacttctg 480
aaggtcctct atgatgcgga gctgtcccag atgcagaccc atgtcagcga cacgtccgtg 540
gtcctttcca tggacaacaa ccgcaacctg gacctggaca gcattattgc cgaggctcgt 600
gcccagtacg aggagattgc ccagaggagc aaggctgagg ctgaagccct gtaccagacc 660
aaggtccagc agctccagat ctcggttgac caacatggtg acaacctgaa gaacaccaag 720
agtgaattg cagagctcaa caggatgatc cagaggctgc gggcagagat cgagaacatc 780
aagaagcagt gccagactct tcaggtatcc gtggctgatg cagagcagcg aggtgagaat 840
gcccttaaag atgcccacag caagcgcgta gagctggagg ctgccctgca gcaggccaag 900
gaggagctgg cacgaatgct gcgtgagtac caggagctca tgagtgtgaa gctggccttg 960
gacatcgaga tcgccacctc ccgcaaactg ctggagggcg aggagtacag aatgtctgga 1020
gaatgccaga gtgccgtgag catctctgtg gtcagcggta gcaccagcac tggaggcatc 1080
agcggaggat taggaagtgg ctccgggttt ggcctgagta gtggctttgg ctccggctct 1140
ggaagtggct ttgggtttgg tggcagtgtc tctggcagtt ccagcagcaa gatcatctct 1200
accaccaccc tgaacaagag acgatagagg agacgaggtc cctgcagctc actgtgtcca 1260

```

gctgggcccc gcactggtgt ctctgtgctt ccttcacttc acctccatcc tctgtctctg 1320
gggctcatct tactagtatc ccctccacta tcccatgggc tctctctgcc ccaggatgat 1380
cttctgtgct gggacaggga ctctgcctct tggagtttgg tagctacttc ttgatttggg 1440
cctggtgacc cacctggaat gggaaggatg tcagctgacc tctcacctcc catggggcaga 1500
gaagaaaatg accaggagtg tcatctccag aattattggg gtcacatatg tcccttccca 1560
gtccaatgcc atctcccact agatcctgta ttatccatct acatcagaac caaactactt 1620
ctccaacacc cggcagcact tggccctgca agcttaggat gagaaccact tagtgtccca 1680
ttctactcct ctcatccct cttatccatc tgcaggtgaa tcttcaataa aatgcttttg 1740
tcattc 1746

```

<210> 42

<211> 7265

<212> DNA

<213> Homo sapiens

<400> 42

```

catagagcca gcgggcgcgg gcgggacggg cgcgccgcgg ccggacccag ccagggcacc 60
acgctgcccg gccctgcgcc gccaggcact tctttccggg gtcctaggg acgccagaag 120
gaagtcaacc tctgctgctt ctcccttgcc tgcgttgga cttccttttt ttgttgtttt 180
tttttgtttt tcccctttct tccttttgaa ttaactggct tcttggttg atgttttcaa 240
cttctttcct ggctgcgaac ttttcccaa ttgttttct tttacaacag ggggagaaaag 300
tgctctgtgg tccgaggcga gccgtgaagt tgcgtgtgcg tggcagtgtg cgtggcagga 360
tgtgctgtgc tgtgtaacct gagccgccc atctgtttcg atctgcgcc cggagccctc 420
cctcaaggcc cgctccacct gctgcggtta cgcggcgctc gtgggtgttc gtgcctcgga 480
gcagctaacc ggcggtgct gggcgacggg ggaggagtat cgtctcgctg ctgcccagat 540
cagggtgag tcaccagct gatgtagaca gtggtgcct tccgaagagt gcgtgtttgc 600
atgtgtgtga ctctgcggct gctcaactcc caacaaacca gaggaccagc cacaaactta 660
accaacatcc ccaaaccga gttcacagat gtgggagagc tgtagaacct tgagtgtcat 720
cgactgggcc ttcttatgat tgttgtttta agattagctg aagatctctg aaacgctgaa 780
ttttctgcac tgagcgtttt gacagaattc attgagagaa cagagaacat gacaagtact 840
tctagctcag cactgctcca actactgaag ctgattttca aggctactta aaaaaatctg 900
cagcgtacat taatggattt ctgttgtgtt taaattctcc acagattgta ttgtaaatat 960

```

tttatgaagt agagcatatg tatatatatta tatatacgtg cacatacatt agtagcacta	1020
ccttttgaag tctcagctct tgcttttctg gactgaagcc agttttgcat gataaaagtg	1080
gccttggttac gggagataat tgtgttctgt tgggacttta gacaaaactc acctgcaaaa	1140
aactgacagg cattaactac tggaaacttcc aaataatgtg tttgctgac gttttactct	1200
tcgcataaat attttaggaa gtgtatgaga attttgcctt caggaacttt tctaacagcc	1260
aaagacagaa cttaacctct gcaagcaaga ttctgtgaag atagtctcca ctttttaatg	1320
cactaagcaa tcggttgcta ggagcccatc ctgggtcaga ggccgatccg cagaaccaga	1380
acgttttccc ctctggact gttagtaact tagtctccct cctcccctaa ccacccccgc	1440
cccccccac ccccgagcgt aataaaggcc cctgaacgtg tatgttggtc tcccgggagc	1500
tgcttgctga agatccgcgc ccctgtcgcc gtctggtagg agctgtttgc agggctcctaa	1560
ctcaatcggc ttgttgtgat gcgtatcccc gtagatgcca gcacgagccg ccgcttcacg	1620
ccgccttcca ccgcgtgag ccagggcaag atgagcgagg cgttgccgct gggcgccccg	1680
gacgccggcg ctgccctggc cggcaagctg aggagcggcg accgcagcat ggtggaggtg	1740
ctggccgacc acccgggcca gctgggtgcgc accgacagcc ccaacttcct ctgctccgtg	1800
ctgcctacgc actggcgctg caacaagacc ctgcccacg ctttcaaggt ggtggcccta	1860
ggggatgttc cagatggcac tctgggtcact gtgatggctg gcaatgatga aaactactcg	1920
gctgagctga gaaatgctac cgcagccatg aagaaccagg ttgcaagatt taatgacctc	1980
aggtttgtcg gtcgaagtgg aagagggaaa agcttcactc tgaccatcac tgtcttcaca	2040
aaccacccgc aagtcgccac ctaccacaga gccatcaaaa tcacagtgga tgggccccga	2100
gaacctcgaa gacatcggca gaaactagat gatcagacca agcccgggag cttgtccttt	2160
tccgagcggc tcagtgaact ggagcagctg cggcgcacag ccatgagggt cagcccacac	2220
caccagccc ccacgcccac ccctcgtgcc tccctgaacc actccactgc ctttaaccct	2280
cagcctcaga gtcagatgca ggatacaagg cagatccaac catccccacc gtggtcctac	2340
gatcagtcct accaatacct gggatccatt gcctctcctt ctgtgcaccc agcaacgccc	2400
atttcacctg gacgtgccag cggcatgaca accctctctg cagaactttc cagtgcactc	2460
tcaacggcac ccgacctgac agcgttcagc gacccgcgcc agttccccgc gctgccctcc	2520
atctccgacc cccgcatgca ctatccaggc gccttcacct actccccgac gccggtcacc	2580
tcgggcatcg gcatcggcat gtcggccatg ggctcggcca cgcgctacca cacctacctg	2640
ccgccgccct accccggctc gtcgcaagcg cagggaggcc cgttccaagc cagctcgccc	2700

tccctaccacc	tgtactacgg	cgctcgggcc	ggctcctacc	agttctccat	ggtgggcggc	2760
gagcgctcgc	cgccgcgcat	cctgccgccc	tgcaccaacg	cctccaccgg	ctccgcgctg	2820
ctcaacccca	gcctcccgaa	ccagagcgac	gtggtggagg	ccgagggcag	ccacagcaac	2880
tccccacca	acatggcgcc	ctccgcgcgc	ctggaggagg	ccgtgtggag	gccctactga	2940
ggcgccaggc	ctggcccggc	tgggccacgc	gggcgcgcgc	cttcgcctcc	gggcgcgcgg	3000
gcctcctggt	cgcgacaagc	ccgccgggat	cccgggccct	gggcccggcc	accgtcctgg	3060
ggccgagggc	gcccgcggc	caggatctcg	ctgtagggtca	ggcccgcgca	gcctcctcgc	3120
cccagaagcc	cacgccgccg	ccgtctgctg	gcgccccggc	cctcgcggag	gtgtccgagg	3180
cgacgcacct	cgagggtgtc	cgccggcccc	agcaccacag	ggacgcgctg	gaaagcaaac	3240
aggaagattc	ccggagggaa	actgtgaatg	cttctgattt	agcaatgctg	tgaataaaaa	3300
gaaagatttt	atacccttga	cttaactttt	taaccaagtt	gtttattcca	aagagtgtgg	3360
aattttggtt	ggggtggggg	gagaggaggg	atgcaactcg	ccctgtttgg	catctaattc	3420
ttatttttaa	tttttccgca	ccttatcaat	tgcaaaatgc	gtatttgcac	ttgggtggtt	3480
tttattttta	tatacgttta	tataaatata	tataaattga	gcttgcttct	ttcttgcttt	3540
gaccatggaa	agaaatatga	ttcccttttc	tttaagtttt	atttaacttt	tcttttggac	3600
ttttgggtag	ttgttttttt	ttgttttggt	ttgttttttt	gagaaacagc	tacagctttg	3660
ggtcattttt	aactactgta	ttcccacaag	gaatccccag	atatttatgt	atcttgatgt	3720
tcagacattt	atgtgttgat	aattttttta	ttattttaa	gtacttatat	taagaaaaat	3780
atcaagtact	acattttctt	ttgttcttga	tagtagccaa	agttaaatgt	atcacattga	3840
agaaggctag	aaaaaaagaa	tgagtaatgt	gatcgcttgg	ttatccagaa	gtattgttta	3900
cattaaactc	cctttcatgt	taatcaaaca	agtgagtagc	tcacgcagca	acgtttttta	3960
taggattttt	agacactgag	ggtcactcca	aggatcagaa	gtatggaatt	ttctgccagg	4020
ctcaacaagg	gtctcatatc	taacttcctc	cttaaaacag	agaaggtcaa	tctagtcca	4080
gagggttgag	gcgggtgcca	ataattacat	ctttggagag	gatttgattt	ctgccagggg	4140
atttgctcac	ccaagggtca	tctgataatt	tcacagatgc	tgtgtaacag	aacacagcca	4200
aagtaaactg	tgtagggggg	ccacattttac	ataggaacca	aatcaatgaa	tttaggggtt	4260
acgattatag	caatttaagg	gccaccagaa	gcaggcctcg	aggagtcaat	ttgcctctgt	4320
gtgcctcagt	ggagacaagt	gggaaaacat	ggtcccaact	gtgcgagacc	ccctgtcctg	4380
tgctgctcac	tcaacaacat	ctttgtgttg	ctttcaccag	gctgagacce	taccctatgg	4440

ggatatatggg	cttttacctg	tgcaccagtg	tgacaggaaa	gattcatgtc	actactgtcc	4500
gtggctacaa	ttcaaaggta	tccaatgtcg	ctgtaaatth	tatggcacta	tttttattgg	4560
aggatttggt	cagaatgcag	ttgttgtaca	actcataaat	actaactgct	gatttttgaca	4620
catgtgtgct	ccaaatgatc	tggtgggttat	ttaacgtacc	tcttaaaatt	cggtgaaacg	4680
atttcaggtc	aactctgaag	agtatttgaa	agcaggactt	cagaacagtg	tttgattttt	4740
atthttataaa	tttaagcatt	caaattaggc	aaatctttgg	ctgcaggcag	caaaaacagc	4800
tggacttatt	taaaacaact	tgtttttgag	ttttcttata	tatatattga	ttatttgttt	4860
tacacacatg	cagtagcact	ttggtaagag	ttaaagagta	aagcagctta	tgttgtcagg	4920
tcgttcttat	ctagagaaga	gctatagcag	atctcggaca	aactcagaat	atattcactt	4980
tcatttttga	caggattccc	tccacaactc	agtttcatat	attattccgt	attacatttt	5040
tgcagctaaa	ttaccataaa	atgtcagcaa	atgtaaaaat	ttaatttctg	aaaagcacca	5100
ttagcccatt	ttccccaaat	taaacgtaaa	tgtttttttt	cagcacatgt	taccatgtct	5160
gacctgcaaa	aatgctggag	aaaaatgaag	gaaaaaatta	tgtttttcag	tttaattctg	5220
ttaactgaag	atattccaac	tcaaaaccag	cctcatgctc	tgattagata	atcttttaca	5280
ttgaaccttt	actctcaaag	ccatgtgtgg	agggggcttg	tcactattgt	aggctcactg	5340
gattggatcat	ttagagtthc	acagactctt	accagcatat	atagtattta	attgtttcaa	5400
aaaaaatcaa	actgtagtth	ttttggcgat	aggtctcacg	caacacattt	ttgtatgtgt	5460
gtgtgtgtgc	gtgtgtgtgt	gtgtgtgtga	aaaattgcat	tcattgactt	caggtagatt	5520
aaggatatctt	tttattcatt	gccctcagga	aagttaaggt	atcaatgaga	cccttaagcc	5580
aatcatgtaa	taactgcatg	tgtctgggtc	aggagaagta	ttgaataagc	catttctact	5640
gcttactcat	gtccctattt	atgatttcaa	catggataca	tatttcagtt	ctttcttttt	5700
ctcactatct	gaaaatacat	ttccctccct	ctcttcccc	caatatctcc	ctttttttct	5760
ctcttctct	atcttccaaa	ccccactthc	tccttctctc	ttttctgtg	ttctcttaag	5820
cagatagcac	atacccccac	ccagtaccaa	atttcagaac	acaagaaggt	ccagttcttc	5880
ccccttcaca	taaaggaaca	tggtttgtca	gcctttctcc	tgtttatggg	tttcttcag	5940
cagaacagag	acattgccaa	ccatattgga	tctgcttgct	gtccaaacca	gcaaacttcc	6000
tgggcaaadc	acaatcagtg	agtaaataga	cagcctttct	gctgccttgg	gtttctgtgc	6060
agataaacag	aatgctctg	attagaaagg	aatgaatgg	ttccactcaa	atgtcctgca	6120
atttaggatt	gcagatttct	gccttgaaat	acctgtttct	ttgggacatt	ccgtcctgat	6180

gattttttatt	tttgttggtt	tttattttttg	gggggaatga	catgtttggg	tctttttatac	6240
atgaaaattt	gtttgacaat	aatctcacia	aacatatttt	acatctgaac	aaaatgcctt	6300
tttgtttacc	gtagcgtata	catttgtttt	gggatttttg	tgtgtttggt	gggaattttg	6360
tttttagcca	ggtcagtatt	gatgaggctg	atcatttggc	tctttttttc	cttccagaag	6420
agttgcatca	acaaagttaa	ttgtatttat	gtatgtaaat	agattttaag	cttcattata	6480
aaatattggt	aatgcctata	actttttttc	aatttttttg	tgtgtgtttc	taaggacttt	6540
ttcttaggtt	tgctaaatac	tgtagggaaa	aaatgcttct	ttctaacttt	gtttatttta	6600
gactttaaaa	tgagctactt	cttattcact	tttgtaaaca	gctaatagca	tggttccaat	6660
tttttttaag	ttcacttttt	ttgttctagg	ggaaatgaat	gtgcaaaaaa	agaaaaagaa	6720
ctgttggtta	tttgtgttat	tctggatgta	taaaaatcaa	tggaaaaaaa	taaactttca	6780
aattgaaatg	acggtataac	acatctactg	aaaaagcaac	gggaaatgtg	gtcctattta	6840
agccagcccc	cacctagggt	ctatttgtgt	ggcagttatt	gggtttggtc	acaaaacatc	6900
ctgaaaattc	gtgcgtgggc	ttctttctcc	ctggtacaaa	cgtatggaat	gcttcttaaa	6960
ggggaactgt	caagctgggt	tcttcagcca	gatgacatga	gagaatatcc	cagaaccctc	7020
tctccaaggt	gtttctagat	agcacaggag	agcaggcact	gcactgtcca	cagtccacgg	7080
tacacagtgc	gggtgggccgc	ctccccctcc	ctgggagcat	tcgtcgtgcc	cagcctgagc	7140
agggcagctg	gactgctgct	gttcaggagc	caccagagcc	ttcctctctt	tgtaccacag	7200
tttcttctgt	aaatccagtg	ttacaatcag	tgtgaatggc	aaataaacag	tttgacaagt	7260
acata						7265

<210> 43

<211> 1575

<212> DNA

<213> Homo sapiens

<400> 43

agaaccgcga	cctccgcaac	cttgagcggc	atccgtggag	tgcgctgca	gctacgaccg	60
cagcaggaaa	gcgccgccgg	ccaggcccag	ctgtggccgg	acagggactg	gaagagagga	120
cgcggtcgag	taggtgtgca	ccagccctgg	caacgagagc	gtctaccccg	aactctgctg	180
gccttgaggt	ggggaagccg	gggagggcag	ttgaggaccc	cgcgaggagg	cgtgactggt	240
tgagcgggca	ggccagcctc	cgagccgggt	ggacacaggt	tttaaaacat	gaatcctaca	300
ctcactcttg	ctgccttttg	cctgggaatt	gcctcagcta	ctctaacatt	tgatcacagt	360
ttagaggcac	agtggaccaa	gtggaaggcg	atgcacaaca	gattatacgg	catgaatgaa	420

gaaggatgga ggagagcagt gtgggagaag aacatgaaga tgattgaact gcacaatcag	480
gaatacaggg aagggaaaca cagcttcaca atggccatga acgccttttg agacatgacc	540
agtgaagaat tcaggcaggt gatgaatggc tttcaaaacc gtaagcccag gaaggggaaa	600
gtgttccagg aacctctgtt ttatgaggcc cccagatctg tggattggag agagaaaggc	660
tacgtgactc ctgtgaagaa tcagggtcag tgtggttctt gttgggcttt tagtgctact	720
ggtgctcttg aaggacagat gttccgaaa actgggaggc ttatctcact gagtgaagcag	780
aatctggtag actgctctgg gcctcaaggc aatgaaggct gcaatggtgg cctaattggat	840
tatgctttcc agtatgttca ggataatgga ggcttgact ctgaggaatc ctatccatat	900
gaggcaacag aagaatcctg taagtacaat cccaagtatt ctgttgctaa tgacaccggc	960
tttgtggaca tccctaagca ggagaaggcc ctgatgaagg cagttgcaac tgtggggccc	1020
atttctgttg ctattgatgc aggtcatgag tccttctgt tctataaaga aggcatttat	1080
tttgagccag actgtagcag tgaagacatg gatcatgggtg tgctgggtgg tggctacgga	1140
tttgaaagca cagaatcaga taacaataaa tattggctgg tgaagaacag ctgggggtgaa	1200
gaatggggca tgggtggcta cgtaaagatg gccaaagacc ggagaaacca ttgtggaatt	1260
gcctcagcag ccagctaccc cactgtgtga gctgggtggac ggtgatgagg aaggacttga	1320
ctgggggatgg cgcagcatg ggaggaattc atcttcagtc taccagcccc cgctgtgtcg	1380
gatacacact cgaatcattg aagatccgag tgtgatttga attctgtgat attttcacac	1440
tggtaaatgt tacctctatt ttaattactg ctataaatag gtttatatta ttgattcact	1500
tactgacttt gcattttcgt ttttaaaagg atgtataaat ttttacctgt ttaaataaaaa	1560
tttaatttca aatgt	1575